

DESCRIPTION	BASE SHEET	REQUIRED CELLS			DATE
#4 reinforcement bar ends, bottom origin		BAR4AB			
#4 reinforcement bar ends, center origin		BAR4AC			
#4 reinforcement bar ends, left origin		BAR4AL			
#4 reinforcement bar ends, right origin		BAR4AR			
#4 reinforcement bar ends, top origin		BAR4AT			
#4 reinforcement bar ends, bottom origin		BAR4B			
#4 reinforcement bar ends, center origin		BAR4C			
#4 reinforcement bar ends, left origin		BAR4L			
#4 reinforcement bar ends, right origin		BAR4R			
#4 reinforcement bar ends, top origin		BAR4T			
#5 reinforcement bar ends, bottom origin		BAR5AB			
#5 reinforcement bar ends, center origin		BAR5AC			
#5 reinforcement bar ends, left origin		BAR5AL			
#5 reinforcement bar ends, right origin		BAR5AR			
#5 reinforcement bar ends, top origin		BAR5AT			
#5 reinforcement bar ends, bottom origin		BAR5B			
#5 reinforcement bar ends, center origin		BAR5C			
#5 reinforcement bar ends, left origin		BAR5L			
#5 reinforcement bar ends, right origin		BAR5R			
#5 reinforcement bar ends, top origin		BAR5T			
#6 reinforcement bar ends, bottom origin		BAR6AB			
#6 reinforcement bar ends, center origin		BAR6AC			
#6 reinforcement bar ends, left origin		BAR6AL			
#6 reinforcement bar ends, right origin		BAR6AR			
#6 reinforcement bar ends, top origin		BAR6AT			
#6 reinforcement bar ends, bottom origin		BAR6B			
#6 reinforcement bar ends, center origin		BAR6C			
#6 reinforcement bar ends, left origin		BAR6L			
#6 reinforcement bar ends, right origin		BAR6R			
#6 reinforcement bar ends, top origin		BAR6T			
#7 reinforcement bar ends, bottom origin		BAR7AB			
#7 reinforcement bar ends, center origin		BAR7AC			
#7 reinforcement bar ends, left origin		BAR7AL			
#7 reinforcement bar ends, right origin		BAR7AR			
#7 reinforcement bar ends, top origin		BAR7AT			
#7 reinforcement bar ends, bottom origin		BAR7B			

DESCRIPTION	BASE SHEET	REQUIRED CELLS			DATE
#7 reinforcement bar ends, center origin		BAR7C			
#7 reinforcement bar ends, left origin		BAR7L			
#7 reinforcement bar ends, right origin		BAR7R			
#7 reinforcement bar ends, top origin		BAR7T			
#8 reinforcement bar ends, bottom origin		BAR8AB			
#8 reinforcement bar ends, center origin		BAR8AC			
#8 reinforcement bar ends, left origin		BAR8AL			
#8 reinforcement bar ends, right origin		BAR8AR			
#8 reinforcement bar ends, top origin		BAR8AT			
#8 reinforcement bar ends, bottom origin		BAR8B			
#8 reinforcement bar ends, center origin		BAR8C			
#8 reinforcement bar ends, left origin		BAR8L			
#8 reinforcement bar ends, right origin		BAR8R			
#8 reinforcement bar ends, top origin		BAR8T			
d bar detail for type T railing curb		BD1001			
Bearing details for integral abutments with steel beams		BRGINT			
Shear key clamp at stage joint		CLAMP			
Shear connector details		CONN			
4" x 12" drain		D4X12			
Curb section on PPC deck beam for type T rail		DD1004			
Drain detail for PPC deck beam		DD1005			
Deck section at abutment, neoprene joint		DD7001			
Diaphragm for girders less than 48"		DIAPH			
Sect thru abut, fixed, bit wearing surface, 11" and 17" beams		DKBM01			
Sect thru abut, fixed, bit wearing surface, 21" thru 33" beams		DKBM02			
Sect thru abut, fixed, conc wearing surface, 11" and 17" beams		DKBM03			
Sect thru abut, fixed, conc wearing surface, 21" thru 33" beams		DKBM04			
Sect thru abut, exp, bit wearing surface, 17" beams		DKBM05			
Sect thru abut, exp, bit wearing surface, 21" thru 33" beams		DKBM06			
Sect thru abut, exp, conc wearing surface, 17" beams		DKBM07			
Sect thru abut, exp, conc wearing surface, 21" thru 33" beams		DKBM08			
Sect thru pier, fixed, bituminous wearing surface		DKBM09			
Sect thru pier, exp, bituminous wearing surface		DKBM10			
Sect thru pier, fixed, concrete wearing surface		DKBM11			
Sect thru pier, exp, concrete wearing surface		DKBM12			
Drainage Scupper DS-11		DS11	DS111		8/11/02

DESCRIPTION	BASE SHEET	REQUIRED CELLS			DATE
Drainage Scupper DS-11, left, Plan and Section		DS11L			
Drainage Scupper DS-11, right, Plan and Section		DS11R			
Drainage Scupper DS-12		DS12	DS121		8/1/00
Drainage Scupper DS-12, left, Plan and Section		DS12L			
Drainage Scupper DS-12, right, Plan and Section		DS12R			
Drainage Scupper DS-33		DS33	DS331		8/1/00
Drainage Scupper DS-33, right, Plan and Section		DS33R			
2 1/2" PJS no wearing surface		EXPJT			
4" PJS no wearing surface		EXPJT1			
2 1/2" PJS with wearing surface		EXPJT2			
4" PJS with wearing surface		EXPJT3			
1 3/4" PJS no wearing surface		EXPJT4			
General notes (See Bridge Manual)		GN##			
Pheobe nesting site		GP0001			
Design spec's., stresses & loading PPC deck beams		GP0002			
Section thru integral abutment for PPC beams		GP0003			
Section thru integral abutment for steel beams		GP0004			
Total Bill of Material, 15 lines		GP0005			
Total Bill of Material, 20 lines		GP0006			
Total Bill of Material, 25 lines		GP0007			
Total Bill of Material, 30 lines		GP0008			
Name Plate		GP0009			
Geotextile Wall Brace		GTBRAC			
Geotextile Wall procedure		GTWALL			
Cell contains the title "Notes:" and a number of active points in which to place lines of notes. Left bottom justification must be set to place text. All you need to do is snap to an active point and place your text. Cell origin is top left.		NOTES			
Parapet joint details		PARJNT			
Parapet joint details at sidewalk		PARJT1			
PAY ITEMS FOR TOTAL BILL OF MATERIAL: (sorted here in alphabetical order by description) They have been named in sequence by pay item number.					
Aluminum Railing, Type L		PI39			

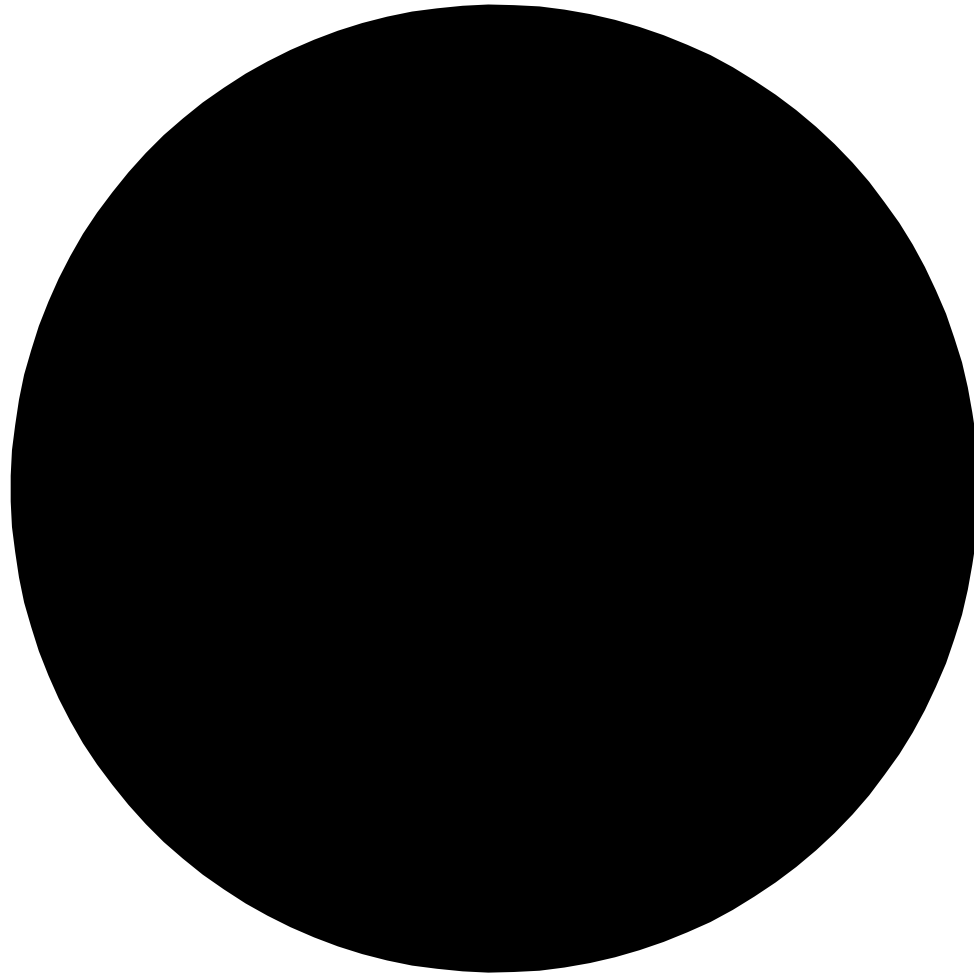
DESCRIPTION	BASE SHEET	REQUIRED CELLS			DATE
Bar Splicers		PI71			
Bridge Deck Grooving		PI22			
Bridge Handrail Removal		PI9			
Bridge Joint System (Expansion)		PI68			
Bridge Joint System (Fixed)		PI69			
Bridge Seat Sealer		PI60			
Cleaning and Painting Steel Bridge No.		PI36			
Cofferdam Excavation		PI13			
Cofferdams		PI15			
Concrete Box Culverts		PI57			
Concrete Removal		PI8			
Concrete Structures		PI20			
Concrete Superstructure		PI21			
Drainage Scuppers, DS-11		PI70			
Drainage Scuppers, DS-12		PI66			
Drainage Scuppers, DS-33		PI67			
Drainage System		PI74			
Drilled Shaft in Rock " Dia.		PI73			
Drilled Shaft in Soil " Dia.		PI72			
Driving and Filling Shells		PI46			
Driving Concrete Piles		PI47			
Driving Steel Piles		PI16			
Elastomeric Bearing Assembly Type		PI25			
Epoxy Crack Sealing		PI61			
Expansion Bolts 3/4 Inch		PI56			
Filter Fabric for use with Riprap		PI5			
Floating Bearing, Fixed		PI65			
Floating Bearing, Guided Expansion		PI63			
Floating Bearing, Non-Guided Expansion		PI64			
Floor Drains		PI17			
Furnishing and Erecting Precast Prestressed Concrete Bulb T-bms		PI27			
Furnishing and Erecting Precast Prestressed Concrete I Beams, "		PI28			
Furnishing and Erecting Structural Steel		PI32			
Furnishing and Erecting Structural Steel		PI33			
Furnishing Concrete Piles		PI45			
Furnishing Metal Pile Shells "		PI43			

DESCRIPTION	BASE SHEET	REQUIRED CELLS			DATE
Furnishing Steel Piles HP x		PI44			
Handrail Concrete Removal		PI10			
Jacking and Cribbing		PI75			
Metal Shoes		PI51			
Name Plates		PI55			
Neoprene Expansion Joint "		PI19			
Porous Granular Embankment		PI2			
Precast Concrete Panel		PI29			
Precast Concrete Plank		PI30			
Precast Prestressed Concrete Deck Beams (" Depth)		PI26			
Precast Prestressed Concrete Plank		PI31			
Preformed Joint Seal "		PI18			
Protective Coat		PI24			
Reinforcement Bars		PI37			
Reinforcement Bars, Epoxy Coated		PI38			
Removal and Disposal of Unsuitable Material		PI1			
Removal of Existing Concrete Deck		PI11			
Removal of Existing Structures		PI6			
Removal of Existing Superstructures		PI7			
Rock Excavation for Structures		PI14			
Sand Backfill		PI59			
Seal Coat Concrete		PI23			
Slopedwall Inch		PI42			
Steel Bridge Rail		PI41			
Steel Railing, Type		PI40			
Steel Sheet Piling		PI52			
Stone Dumped Riprap, Class A		PI4			
Stone Riprap, Class A		PI3			
Structural Steel Repair		PI35			
Structure Excavation		PI12			
Stud Shear Connectors		PI34			
Temporary Bridge Rail		PI54			
Temporary Concrete Barrier		PI62			
Temporary Sheet Piling		PI53			
Temporary Support System		PI76			
Temporary Wall Bracing System		PI77			

DESCRIPTION	BASE SHEET	REQUIRED CELLS			DATE
Test Pile Concrete		PI50			
Test Pile Metal Shells		PI48			
Test Pile Steel HP x		PI49			
Waterproofing Membrane System		PI58			
Pile encasement detail		PILENC			
PJS details		PJS			
Riprap anchor detail		RRAP			
Side mount rail details for PPC deck beams with curbs		SMR01E			
Side mount rail details for PPC deck beams with curbs		SMR02E			
Side mount rail details for PPC deck beams with curbs		SMR03E			
Side mount rail details for PPC deck beams with curbs		SMR04E			
Section thru sidewalk		SWSEC			
Load factor design tables and notes		TABLE1			
Design tabless and notes for PPC beam		TABLE2			
LRFD tables for steel beams		TABLE3			
LRFD tables for PPC beams		TABLE4			
Temporary Concrete Barrier		TMPBRR			

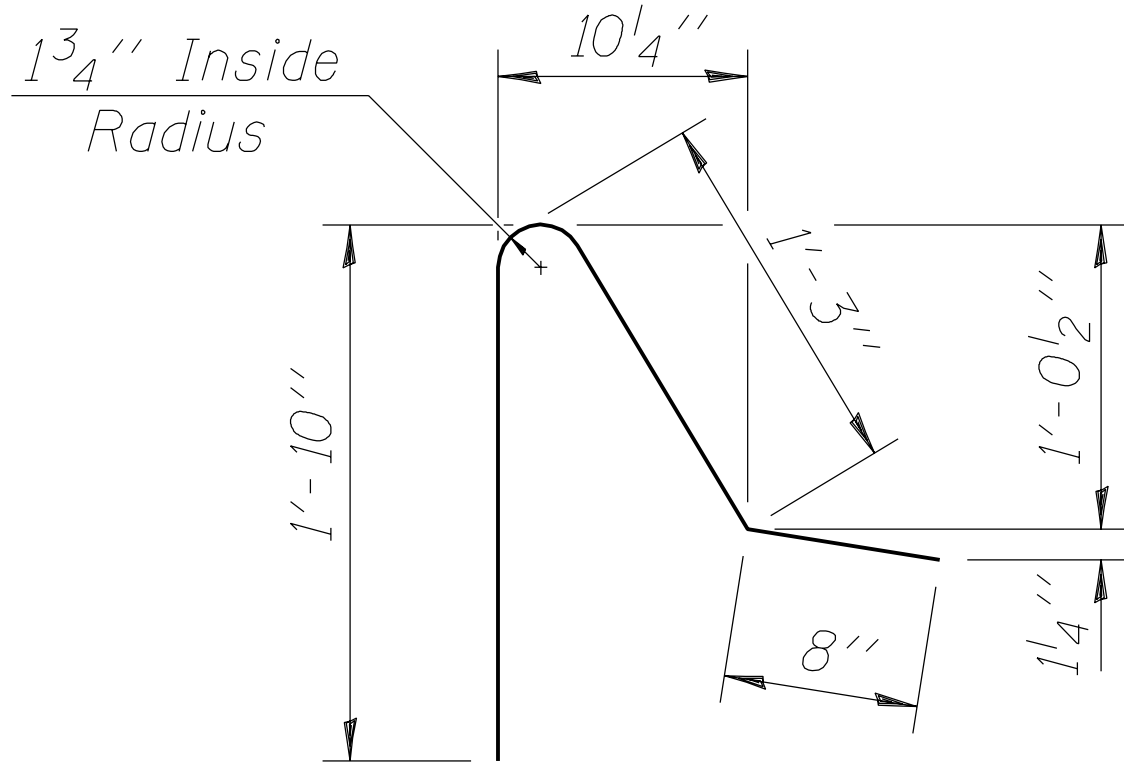
Name: -

BAR4AB through BAR8T



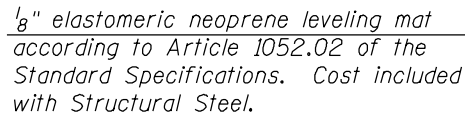
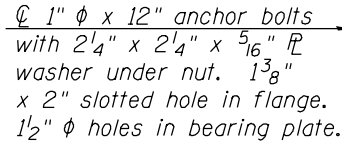
Name: BDI001

D BAR DET FOR TYPE T RL CRB



D BAR

INT ABOUT BRG FOR STL BEAMS

ELEVATION AT ABUTMENT

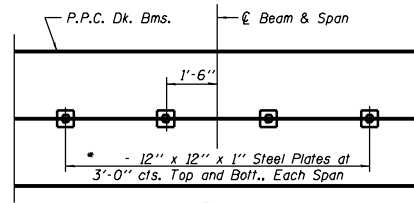
SECTION A - A

FIXED BEARING

*Notes: Anchor bolts at fixed bearings may be built into the masonry.
See sheet for Anchor Bolt installation.*

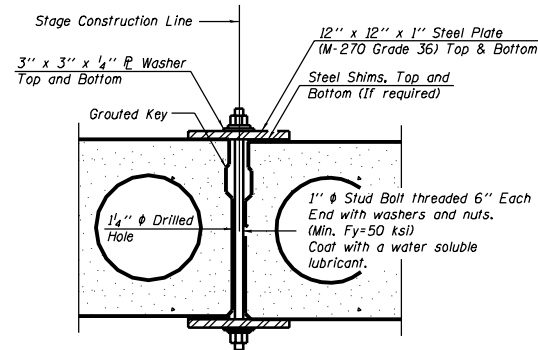
Name: CLAMP

SHEAR KEY CLAMP AT STG JT

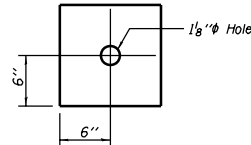


PLAN

* Space plates to miss Temporary Bridge Rail Posts.



SECTION



CLAMPING PLATE

SHEAR KEY CLAMPING DETAILS AT STAGE CONST. JT.

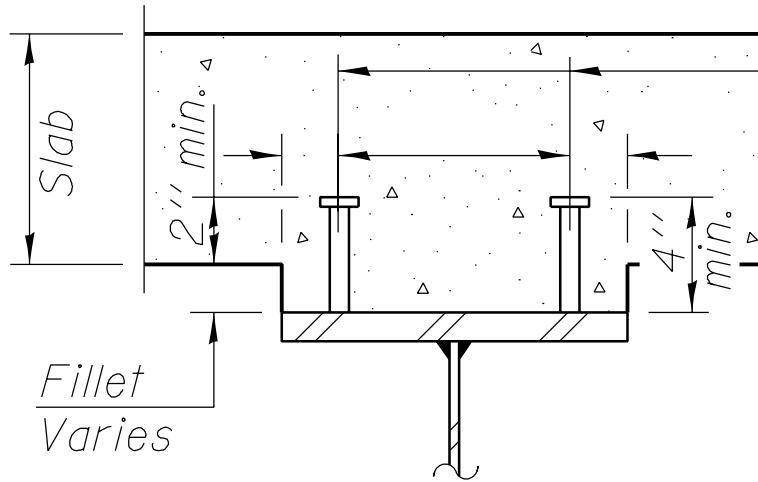
See Special Provisions for Stage Construction of Precast Prestressed Concrete Deck Beams.

Cost included with "Precast Prestressed Concrete Deck Beams".

See Stage Construction Details for traffic lanes.

Name: CONN

SHEAR CONNECTOR DETAIL

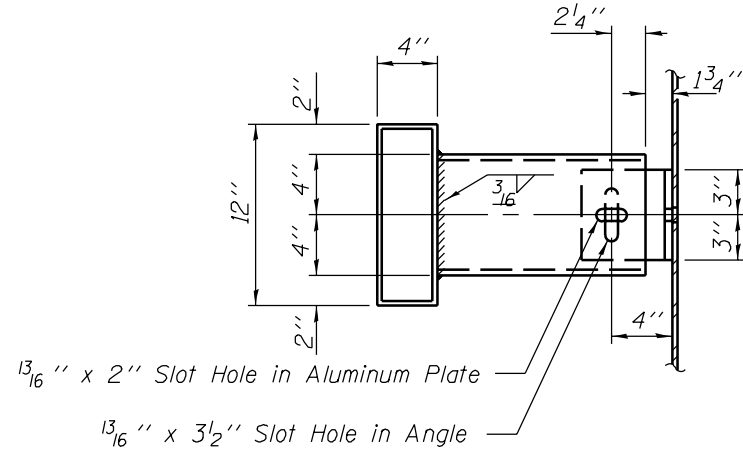
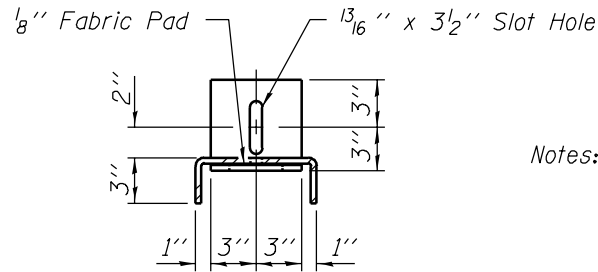
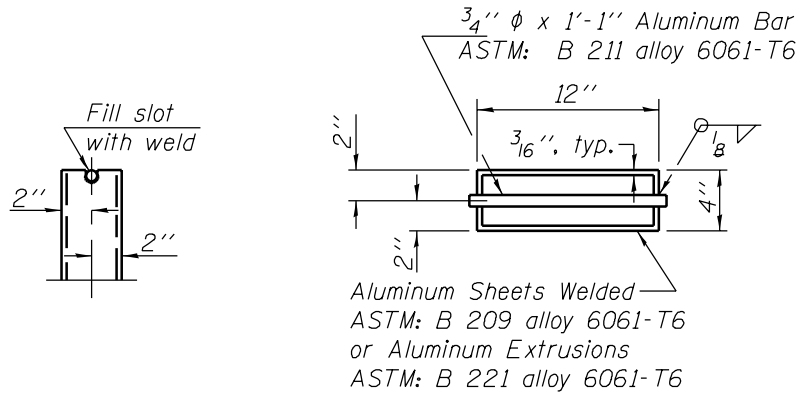


$\frac{3}{4}" \phi$ Granular or solid flux
filled headed studs, automatically
end welded to flange.
(Req'd.)

SECTION A - A

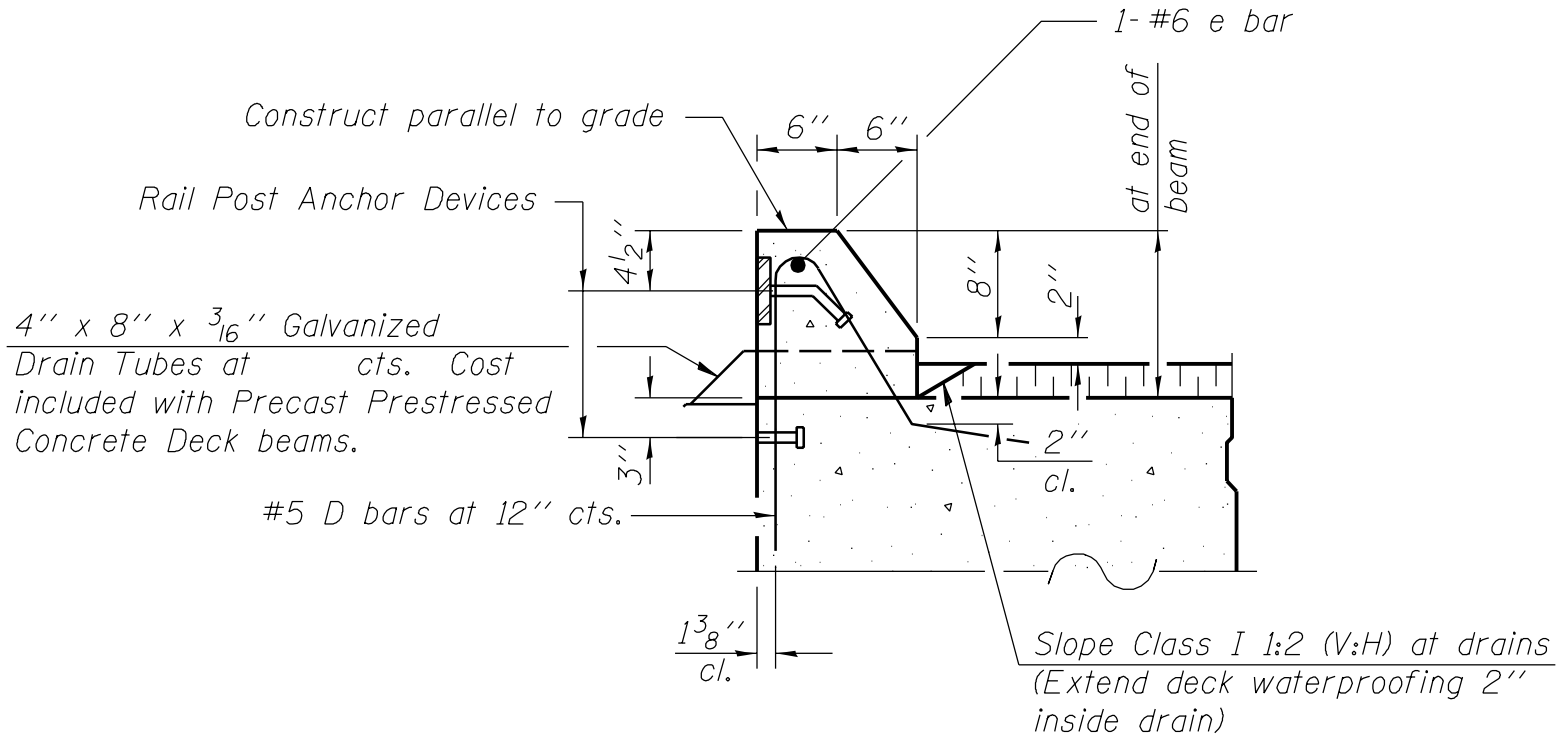
Name: D4X12

4 IN X 12 IN DRAIN



Notes: The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drain shall be cleaned and given a washcoat pretreatment in accordance with Steel Structures Painting Council's Spec. SSPC-SP1 & SSPC Paint 27 prior to painting.

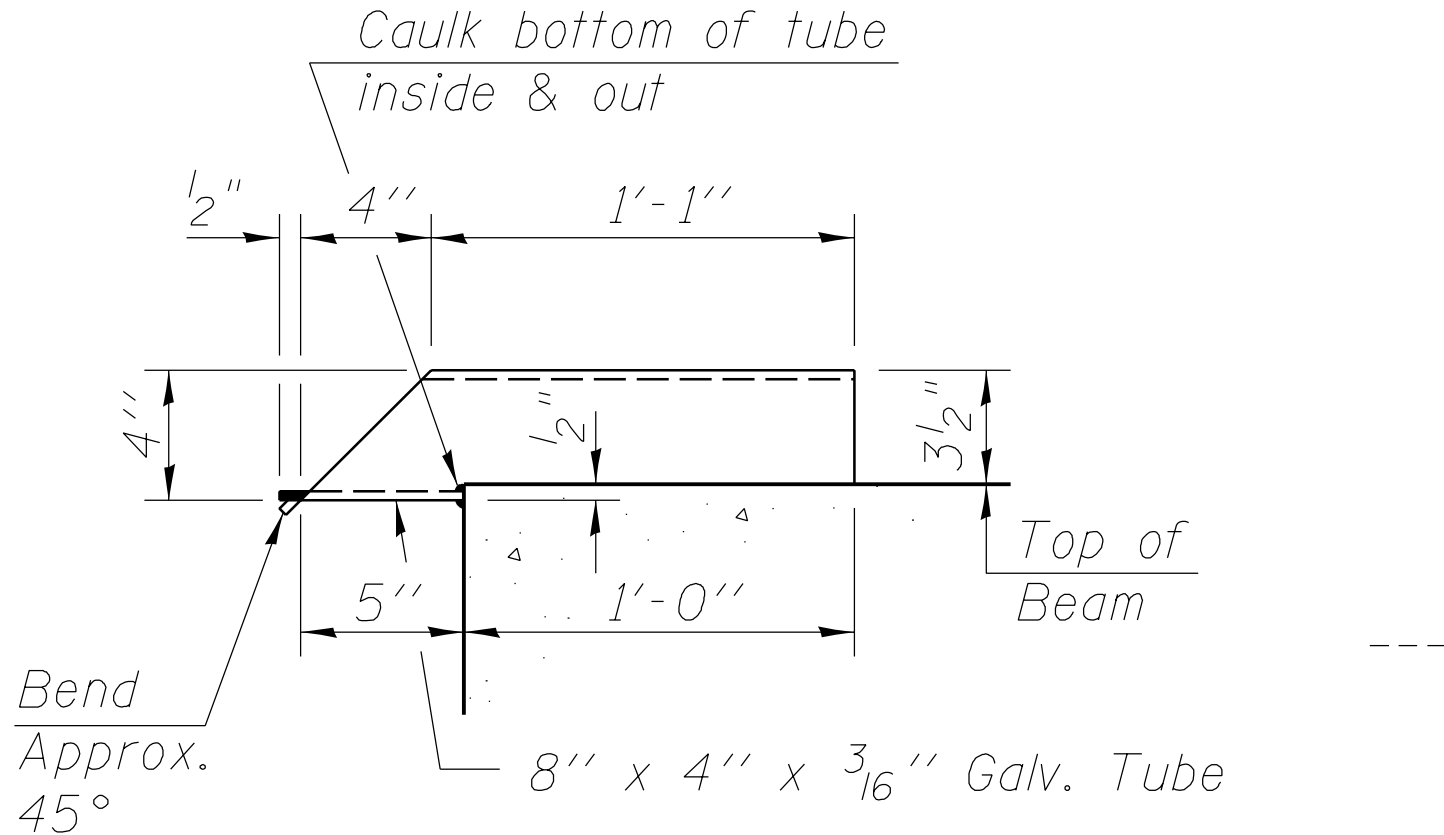
CURB SECT DK BM FOR T RAIL



Curbs shall be poured in the field.

Name: DDI005

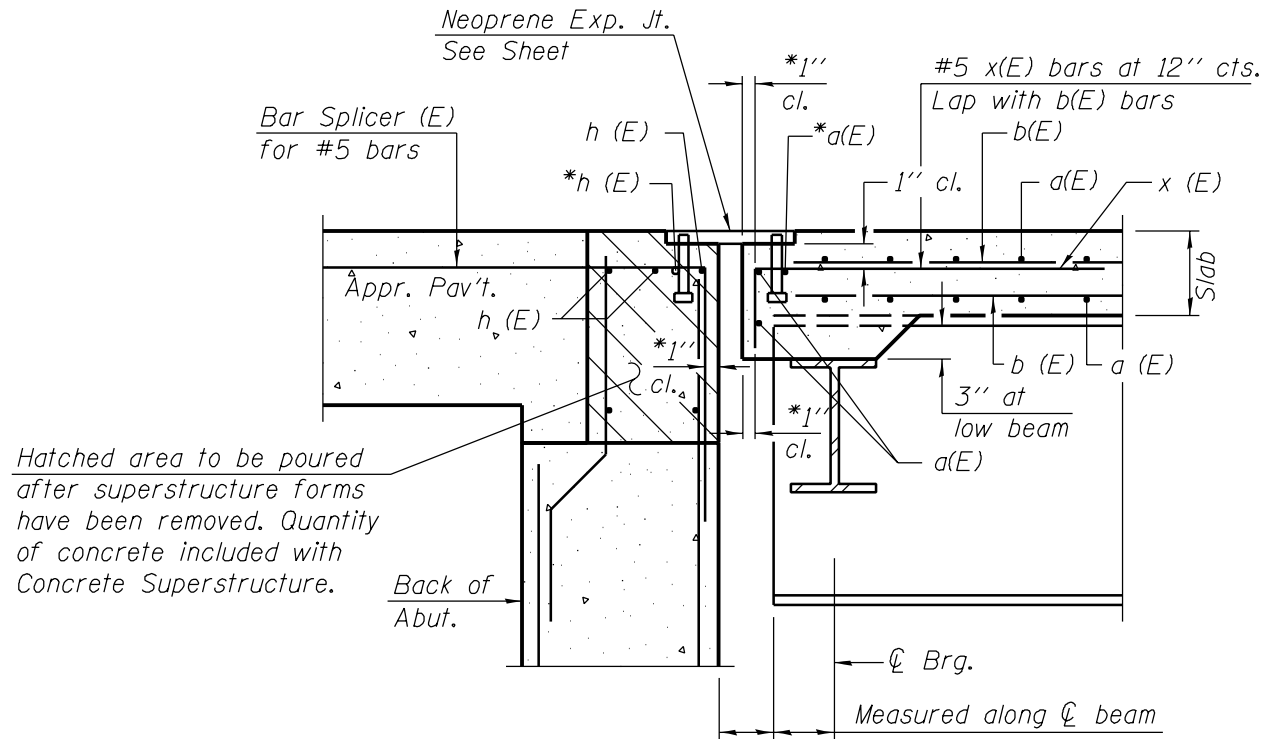
DRAIN DET FOR PPC DK BM



DRAIN DETAIL

Name: DD7001

DK SECT AT ABUT NEOP JT

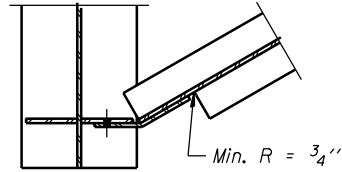


SECTION A-A

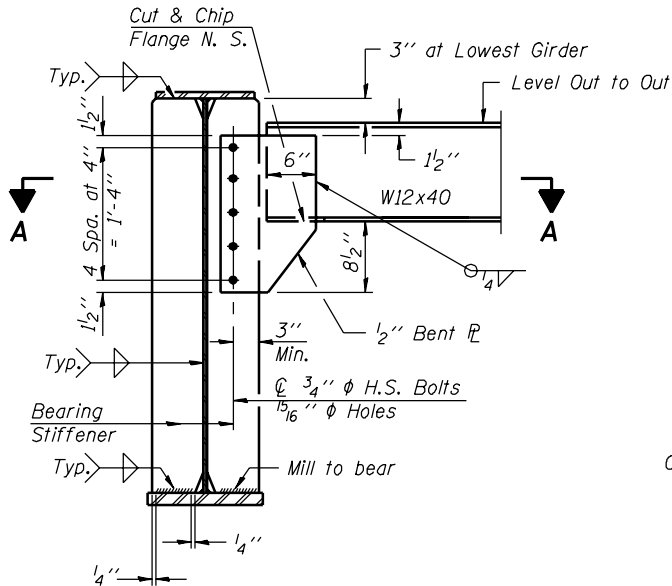
* Place a(E) and h (E) bars in back of anchor bolt as shown if required to maintain 1" cl. (+0-1/8"). Anchor bolts should be tied to a(E) and h (E) bars.

Name: DIAPH

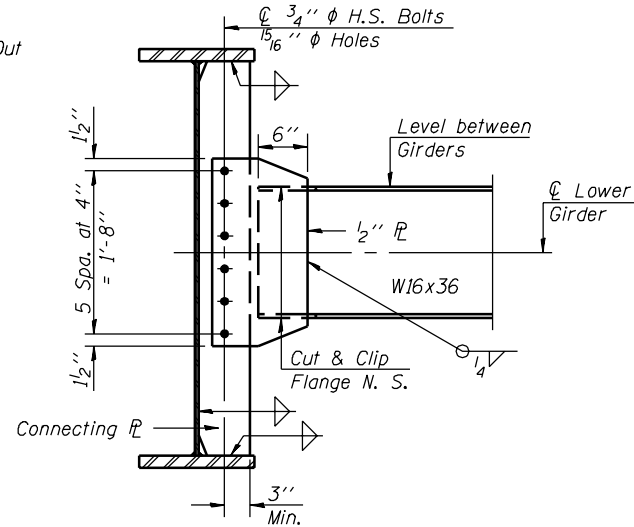
DIAPH GIRD LESS THN 48 IN



SECTION A-A



DIAPHRAGM D
Required

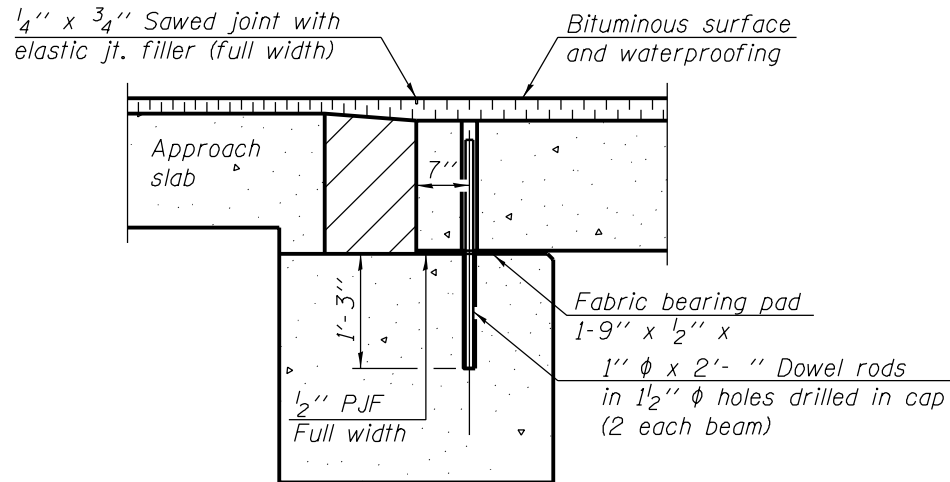


DIAPHRAGM D1
Required

Note: Two hardened washers shall be required over all oversized holes.

Name: DKBM01

FXD ABUT BIT II AND 17 BMS



SECTION THRU ABUTMENT

Notes :

After beams have been erected, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hrs. prior to grouting the shear keys.

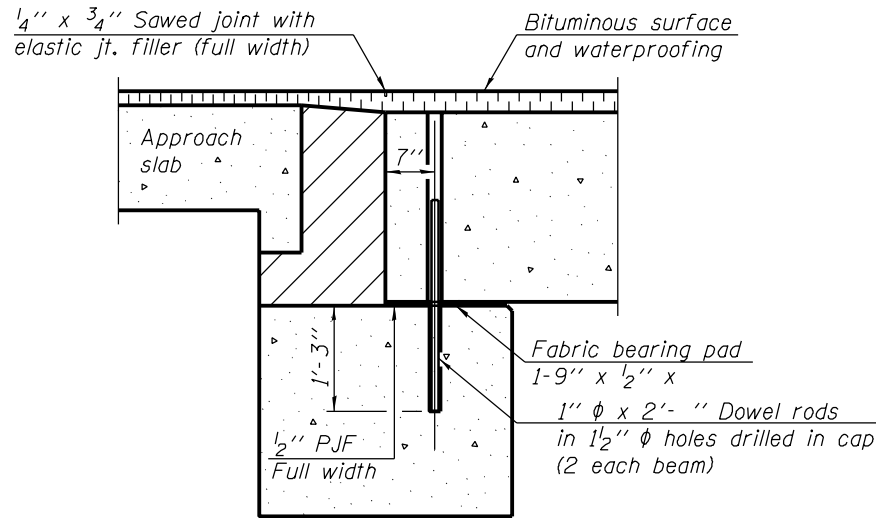
All horizontal dimensions are at right angles to beam ends.

Hatched area to be poured after beams are in place.

See sheet - of - for bearing pad details.

Name: DKBM02

FXD ABUT BIT 21 THRU 33 BMS



SECTION THRU ABUTMENT

Notes :

After beams have been erected, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hrs. prior to grouting the shear keys.

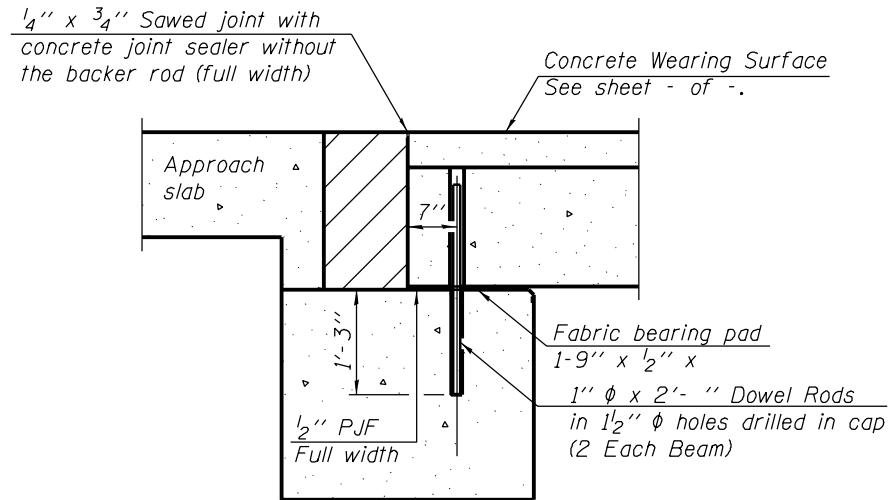
All horizontal dimensions are at right angles to beam ends.

Hatched area to be poured after beams are in place.

See sheet - of - for bearing pad details.

Name: DKBM03

FXD ABUT CONC WS 11 17 BMS



SECTION THRU ABUTMENT

Notes :

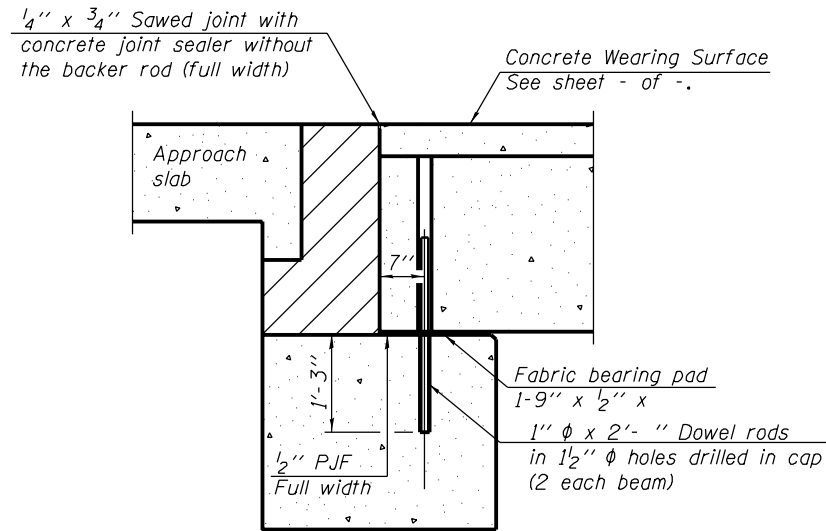
After beams have been erected, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hrs. prior to grouting the shear keys.

All horizontal dimensions are at right angles to beam ends. Hatched area to be poured after concrete wearing surface is in place.

See sheet - of - for bearing pad details.

Name: DKBM04

FXD ABUT CONC WS 21 THRU 33



SECTION THRU ABUTMENT

Notes :

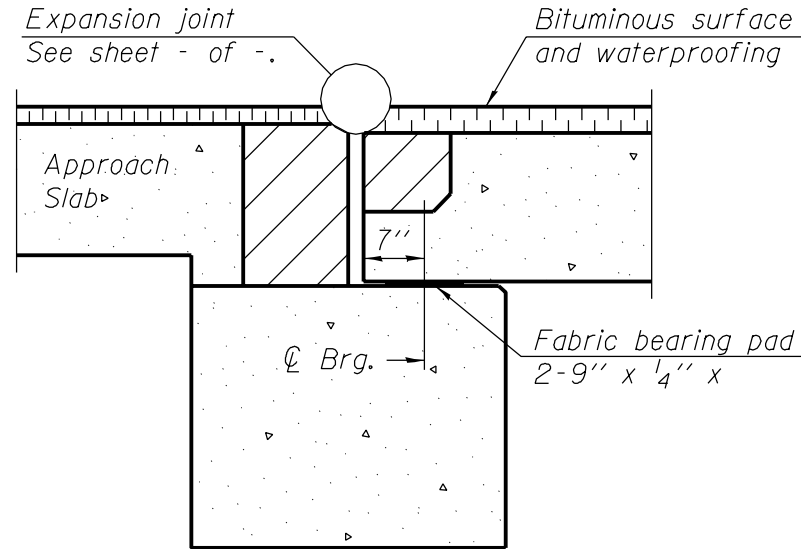
After beams have been erected, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hrs. prior to grouting the shear keys.

All horizontal dimensions are at right angles to beam ends.

Hatched area to be poured after concrete wearing surface is in place.

See sheet - of - for bearing pad details.

Name: DKBM05
EXP ABUT BIT 17 IN BMS



SECTION THRU ABUTMENT

Notes :

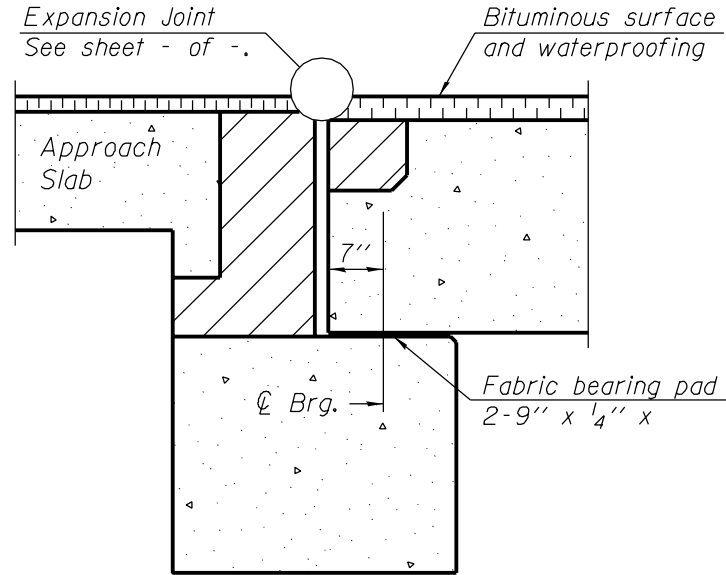
All horizontal dimensions are at right angles to beam ends.

Hatched area to be poured after beams are in place.

See sheet - of - for bearing pad details.

Name: DKBM06

EXP ABUT BIT 21 THRU 33 BMS



SECTION THRU ABUTMENT

Notes :

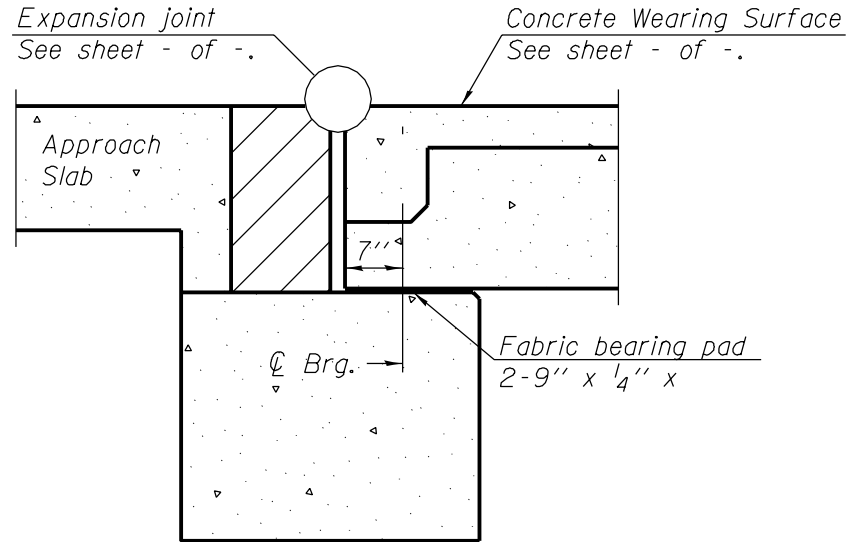
All horizontal dimensions are at right angles to beam ends.

Hatched area to be poured after beams are in place.

See sheet - of - for bearing pad details.

Name: DKBM07

EXP ABUT CONC WS 17 BMS



SECTION THRU ABUTMENT

Notes :

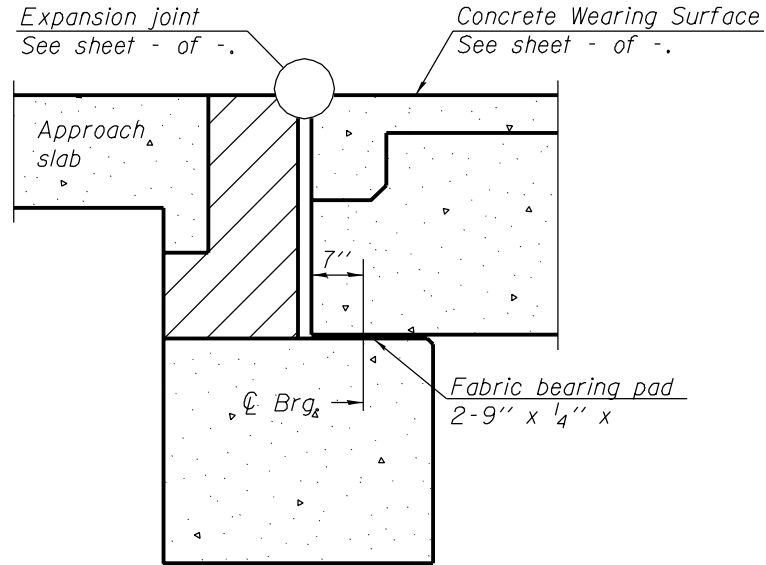
All horizontal dimensions are at right angles to beam ends.

Hatched area to be poured after concrete wearing surface is in place.

See sheet - of - for bearing pad details.

Name: DKBM08

EXP ABUT CONC WS 21 THRU 33



SECTION THRU ABUTMENT

Notes :

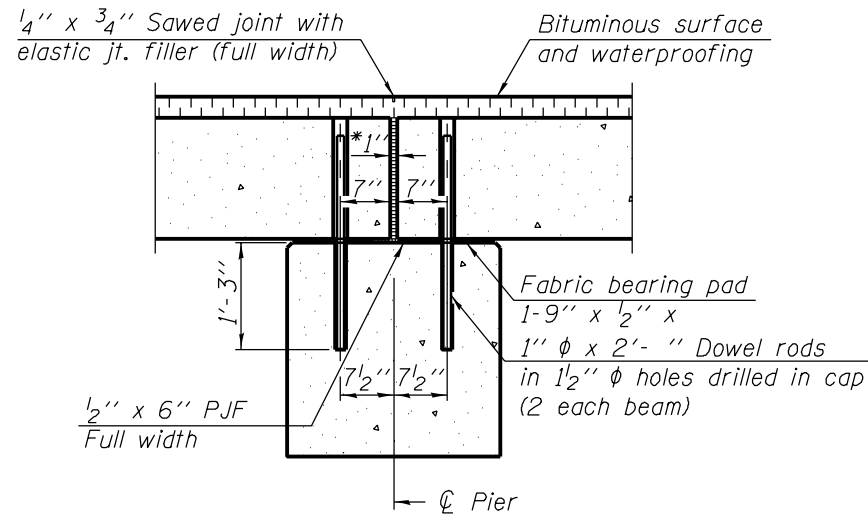
All horizontal dimensions are at right angles to beam ends.

Hatched area to be poured after concrete wearing surface is in place.

See sheet - of - for bearing pad details.

Name: DKBM09

FXD PIER BIT SURF



SECTION THRU FIXED PIER

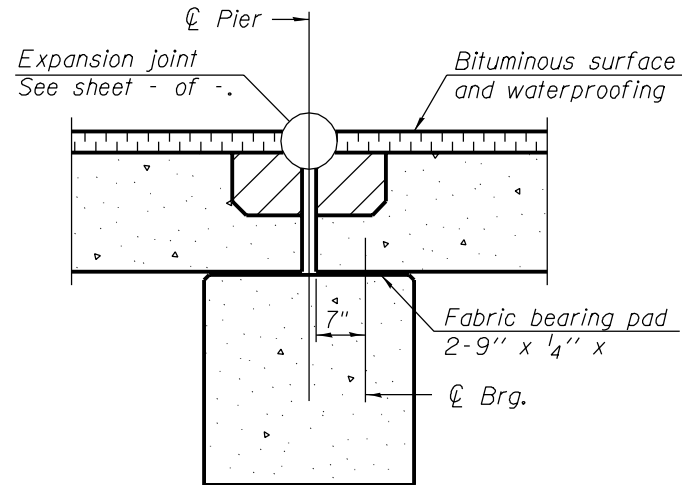
* $1''$ Jt. shall be filled with non-shrink grout. $1''$ dimension may vary to accommodate tolerance in beam lengths.

Notes :

After beams have been erected, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hrs. prior to grouting the shear keys.

All horizontal dimensions are at right angles to beam ends.
Hatched area to be poured after beams are in place.
See sheet - of - for bearing pad details.

Name: DKBM10
EXP PIER BIT SURF



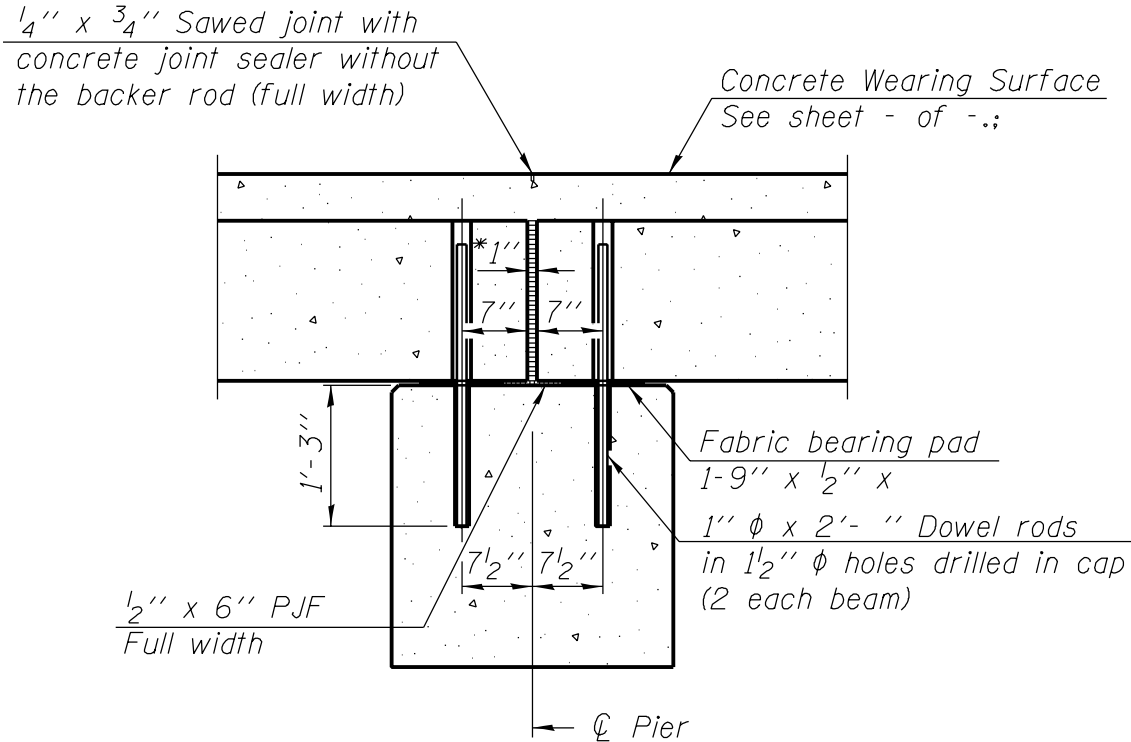
SECTION THRU EXPANSION PIER

Notes :

After beams have been erected, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hrs. prior to grouting the shear keys.

All horizontal dimensions are at right angles to beam ends.
Hatched area to be poured after beams are in place.
See sheet - of - for bearing pad details.

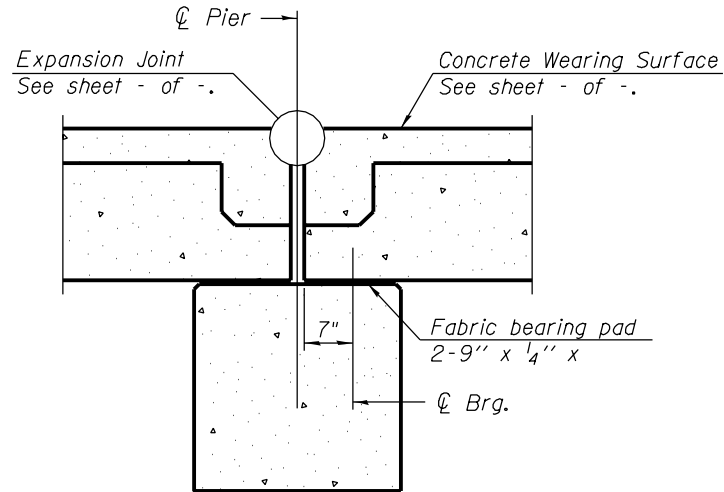
Name: DKBMII
FXD PIER CONC WS



SECTION THRU FIXED PIER

* 1" Jt. shall be filled with non-shrink grout. 1" dimension may vary to accommodate tolerance in beam lengths.

Name: DKBM12
EXP PIER CONC WS



SECTION THRU EXPANSION PIER

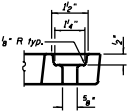
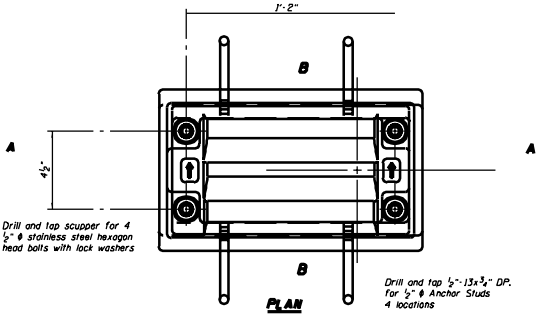
Notes :

After beams have been erected, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hrs. prior to grouting the shear keys.

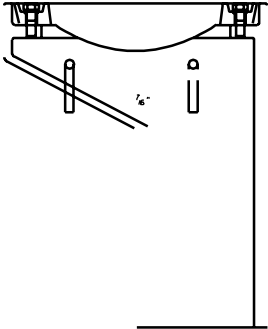
All horizontal dimensions are at right angles to beam ends.
Hatched area to be poured after beams are in place.
See sheet - of - for bearing pad details.

Name: DSII

DRAINAGE SCUPPER DSII



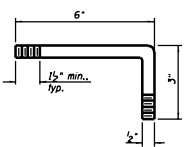
BOLT HOLE DETAIL



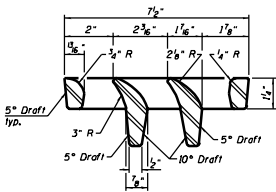
SECTION B-B

Name: DS-III

DRAINAGE SCUPPER DS-II



ANCHOR STUD DETAIL



VANE GRATE DETAIL

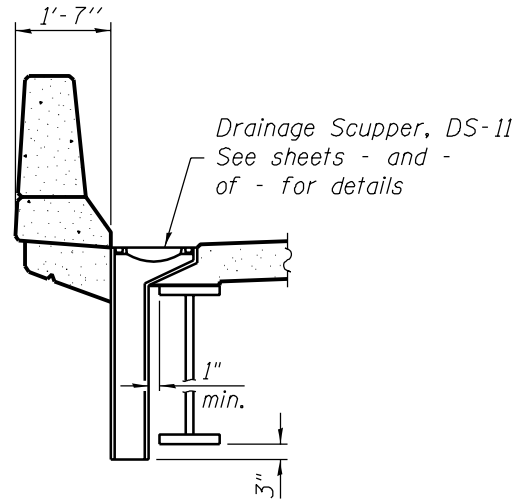
Notes: All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.
Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO W 235.
The grate, frame and downspout shall be galvanized according to AASHTO M 111 and ASTM A 385. Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.
As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(a) of the Standard Specifications.
Structural steel weldments of equal sections and of the same configuration may be substituted for cast iron. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval.
The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.
Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-II.

BILL OF MATERIAL

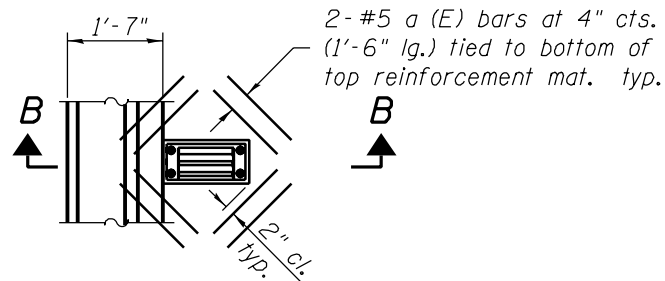
ITEM	UNIT	QUANTITY
Drainage Scupper, DS-II	Each	

DRAINAGE SCUPPER, DS-II

Name: DSIIL
DRN SCPPR DSII LT PLAN

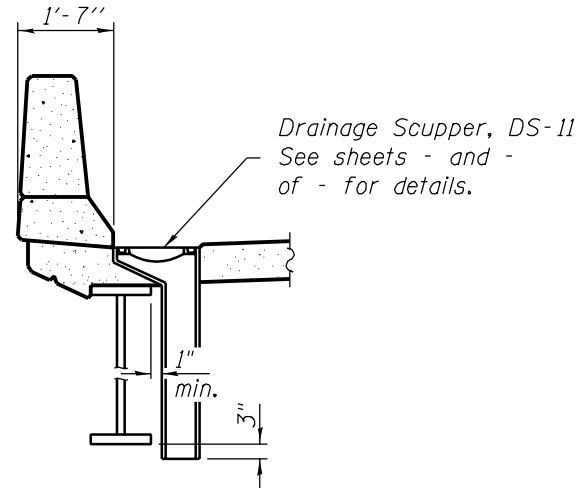


SECTION B-B

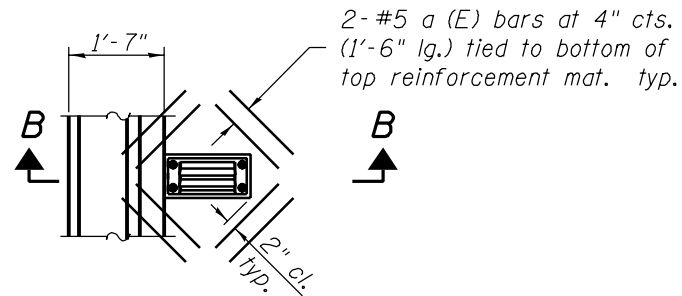


PLAN

Name: DSIIR
DRN SCPPR DSII RT PLN

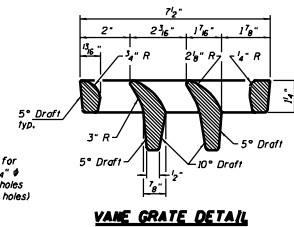
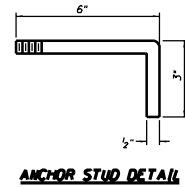
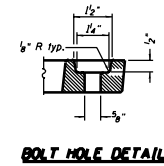
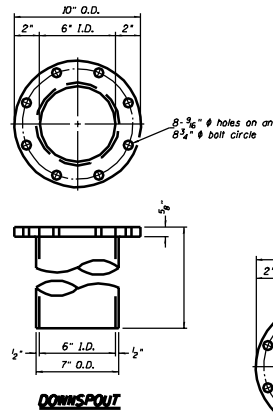
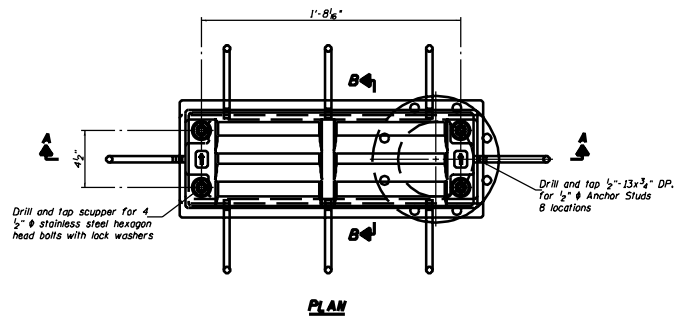


SECTION B-B



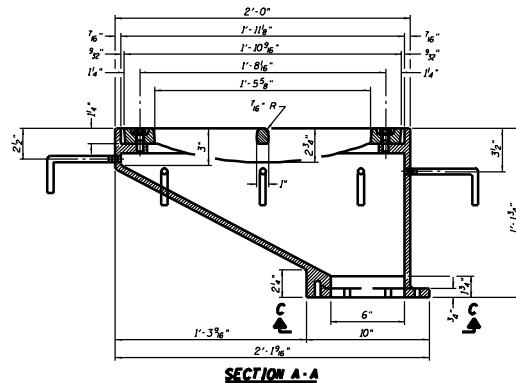
PLAN

Name: DSI2
DRN SCUPPER DS 12

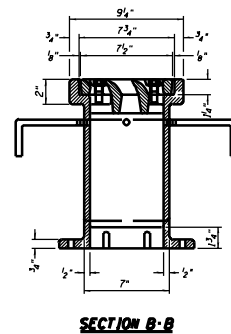


VIEW C-C

Name: DS/2/
DRN SCUPPER DS 12



See sheet of for scupper location relative to parapet.



Notes: All cast iron ports shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.

Anchor Studs and Anchor Bolts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.

The Groat, Frame and Downspout shall be galvanized according to AASHTO M 111 and A 307, 385. Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the Finish coat specified for the exterior side of the fascia beam.

Exterior, but not interior, downspouts shall be made of 304 stainless steel according to Article 106.29(a) of the Standard Specifications.

Structural steel weldments of equal sections and of the same material may be substituted for cast iron. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval.

The Contractor shall take all necessary measures to assure that Protective Coat is not applied to the scupper.

Cost of the Groat, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Driveline Scupper, DS-12.

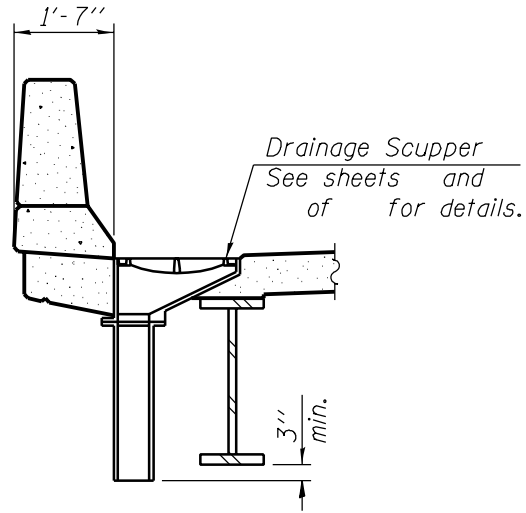
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-12	Each	

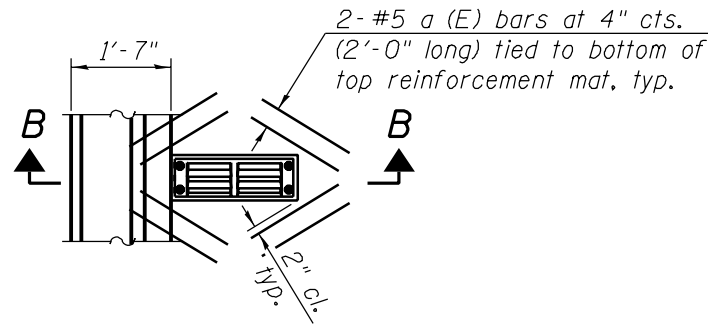
DRAINAGE SCUPPER, DS-12

Name: DSI2L

DRN SCPPR DSI2 LT PLN SECT



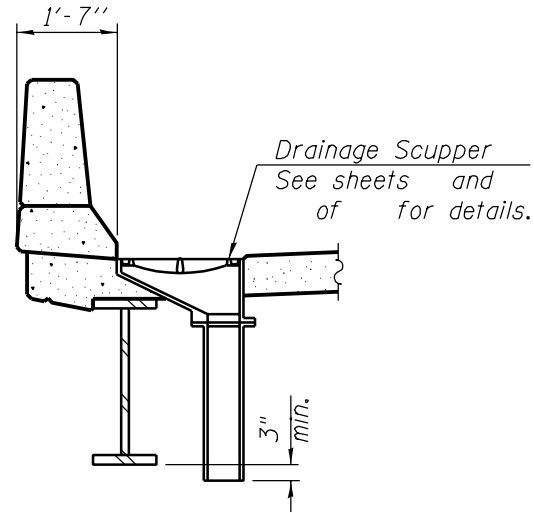
SECTION B-B



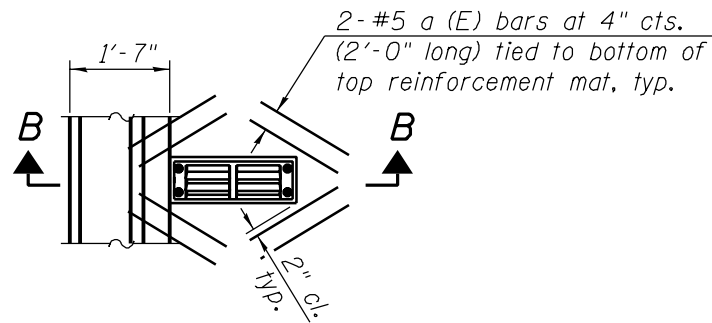
PLAN

Name: DS12R

DRN SCPPR DS 12 RT PLN SECT

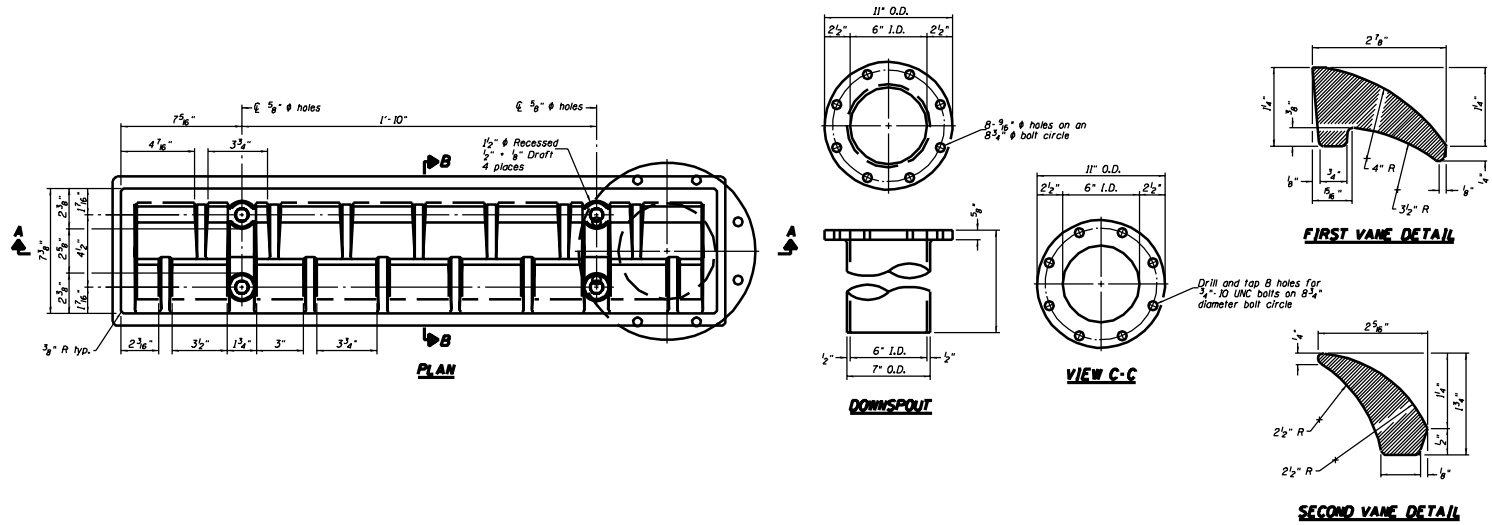


SECTION B-B

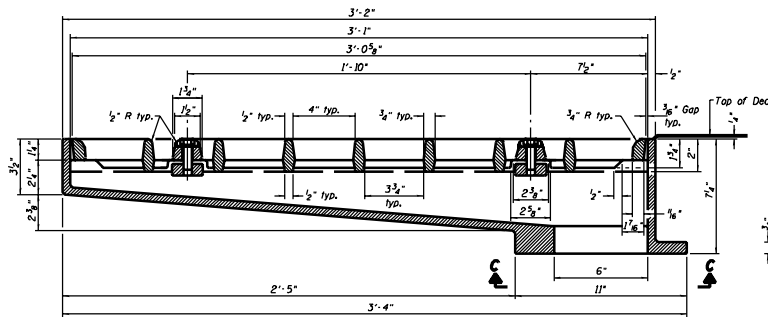


PLAN

Name: DS33
DRAINAGE SCUPPER DS 33

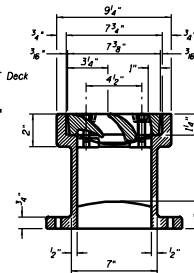


Name: DS331
DRAINAGE SCUPPER DS 33



SECTION A-A

See sheet of for scupper location relative to parapet.



SECTION B-B

*Notes: All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.
Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.*

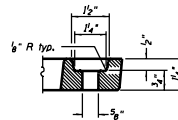
The grate, frame and downspout shall be galvanized according to AASHTO M 111 and ASTM A 385. Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.

As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for cast iron. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval.

The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-33.



BOLT HOLE DETAIL

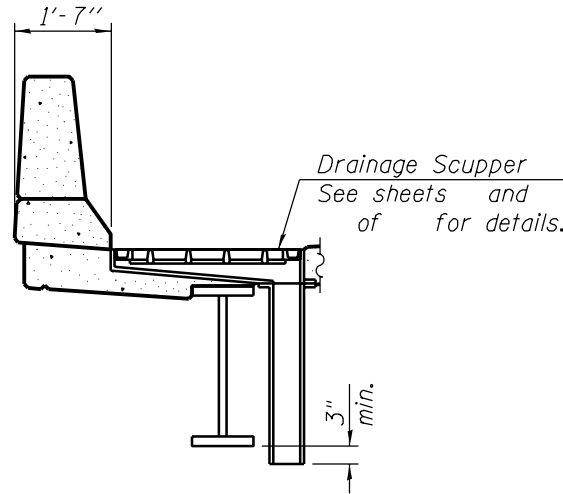
BILL OF MATERIAL

ITEM	UNIT	QUANT.
Dredging Scooper, DS-33	Each	

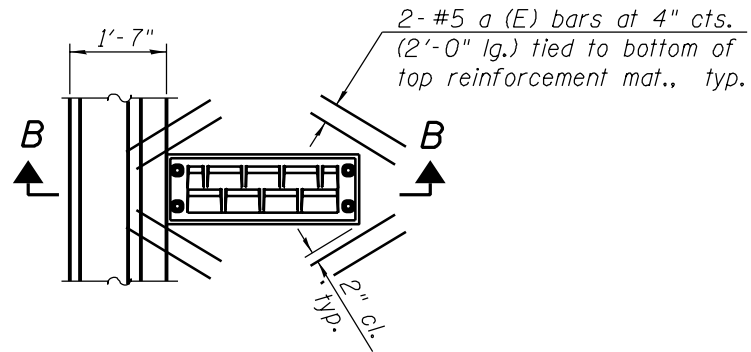
DRAINAGE SCUPPER, DS-33

Name: DS33R

DRN SCPPR DS 33 RT PLN SECT



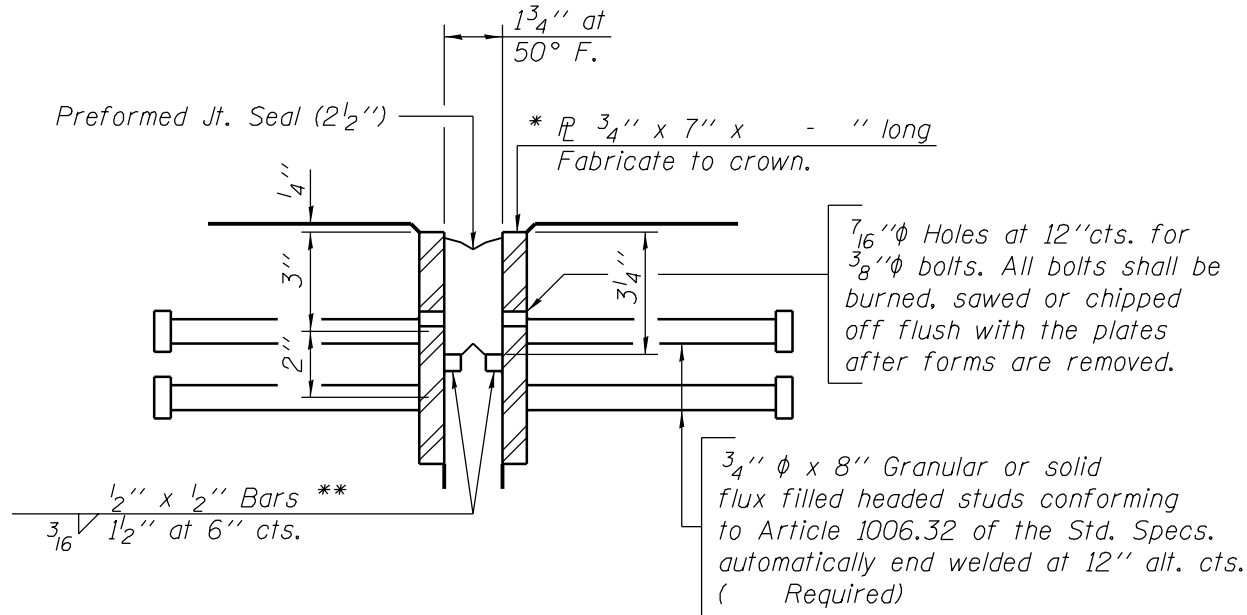
SECTION B-B



PLAN

Name: EXPJT

2 12 IN PJS NO WRING SURF

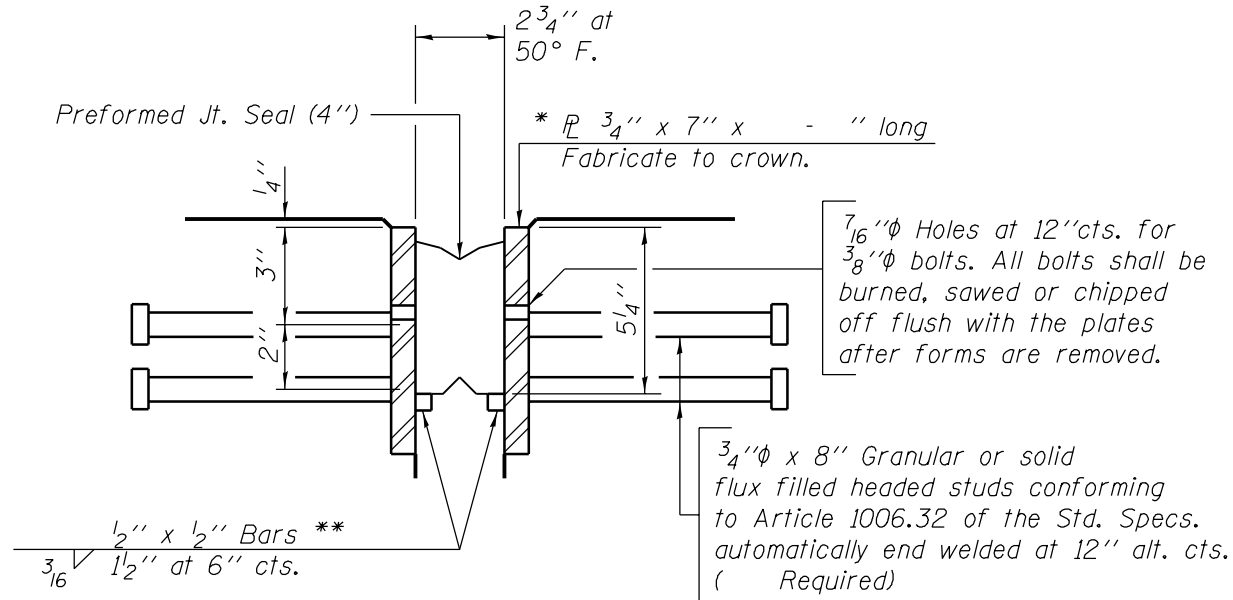


DETAIL A

* Furnish in segments of 20 ft. maximum length. Maximum space between installed segments shall be $\frac{3}{16}''$. Seal space with Silicone Sealant suitable for Structural Steel.

** Cut retainer bars in sidewalk or median 6" short of the sidewalk or median face.

Name: EXPJT1
4 IN PJS NO WRING SURF



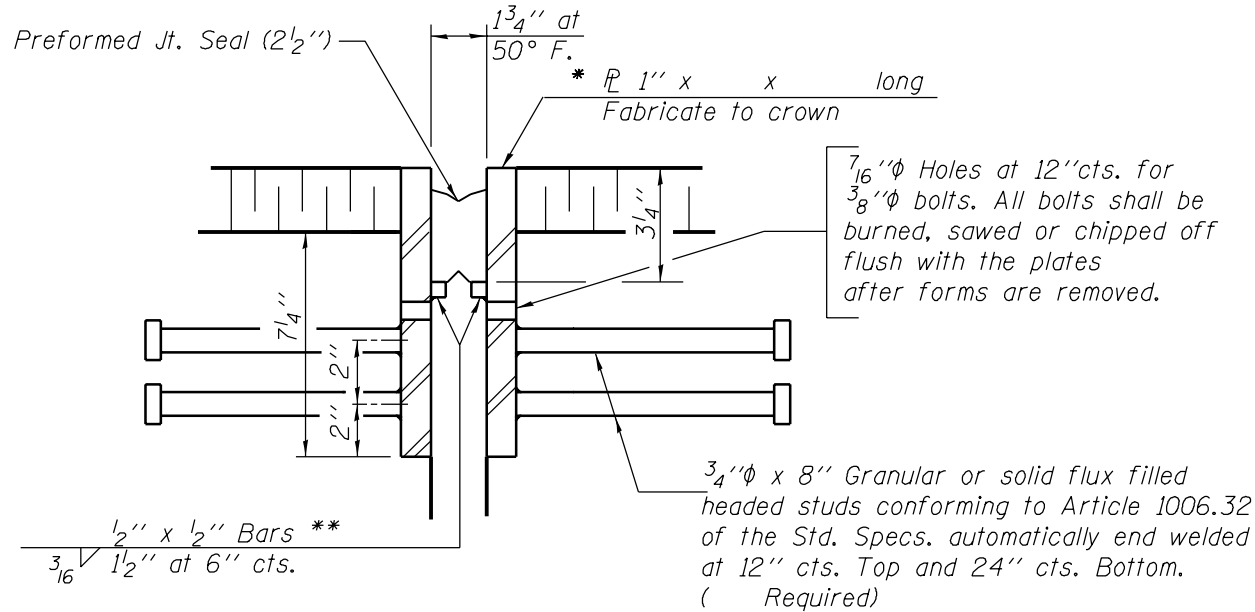
DETAIL A

* Furnish in segments of 20 ft. maximum length. Maximum space between installed segments shall be $\frac{3}{16}''$. Seal space with Silicone Sealant suitable for Structural Steel.

** Cut retainer bars in sidewalk or median 6" short of the sidewalk or median face.

Name: EXPJT2

2 12 IN PJS WRING SURF



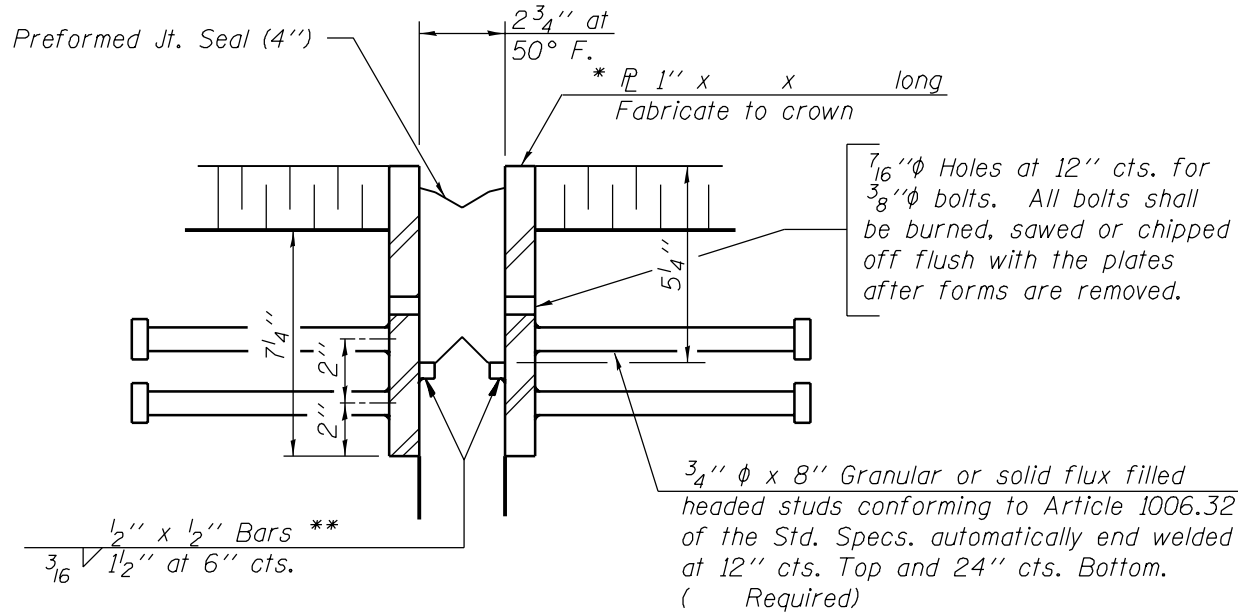
DETAIL A

* Furnish in segments of 20 ft. maximum length. Maximum space between installed segments shall be 3/16". Seal space with Silicone Sealant suitable for Structural Steel.

** Cut retainer bars in sidewalk or median 6" short of the sidewalk or median face.

Name: EXPJT3

4 IN PJS WRING SURF



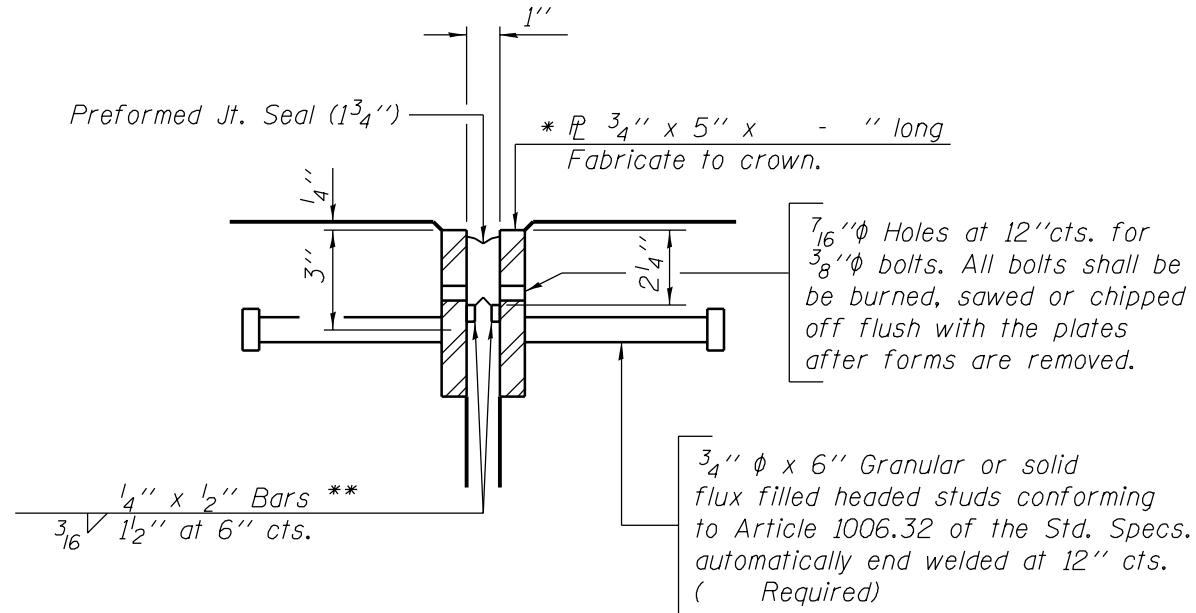
DETAIL A

* Furnish in segments of 20 ft. maximum length. Maximum space between installed segments shall be $\frac{3}{16}''$. Seal space with Silicone Sealant suitable for Structural Steel.

** Cut retainer bars in sidewalk or median 6" short of the sidewalk or median face.

Name: EXPJT4

13 4 IN PJS NO WRING SURF



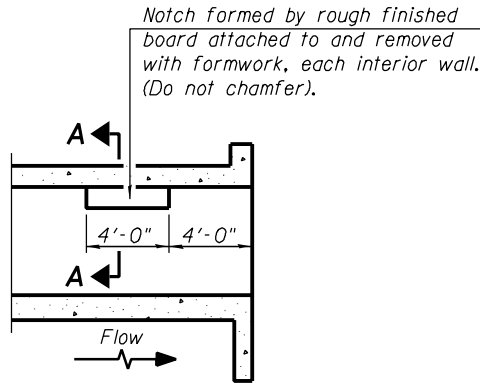
DETAIL A

* Furnish in segments of 20 ft. maximum length. Maximum space between installed segments shall be $\frac{3}{16}$ ". Seal space with Silicone Sealant suitable for Structural Steel.

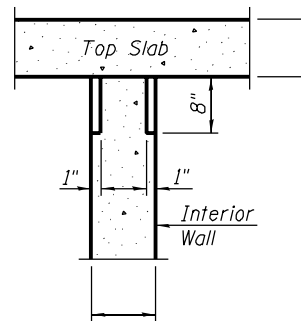
** Cut retainer bars in sidewalk or median 6" short of the sidewalk or median face.

Name: GP0001

PHOEBE NESTING SITE



LONGITUDINAL
SECTION



SECTION A-A

PHOEBE NESTING
SITE DETAILS
(Downstream End Only)

Name: GP0002
HWY CLASS LD DSN SPECS

HIGHWAY CLASSIFICATION

--- Rte. --- - --- Rte.
Functional Class: ---
ADT: (20): (20)
DHV: ---
Design Speed: _ _ m.p.h.
Posted Speed: _ _ m.p.h.

LOADING HS20-44

Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

1996 AASHTO with 1997 thru 2002 Interims

DESIGN STRESSES

FIELD UNITS

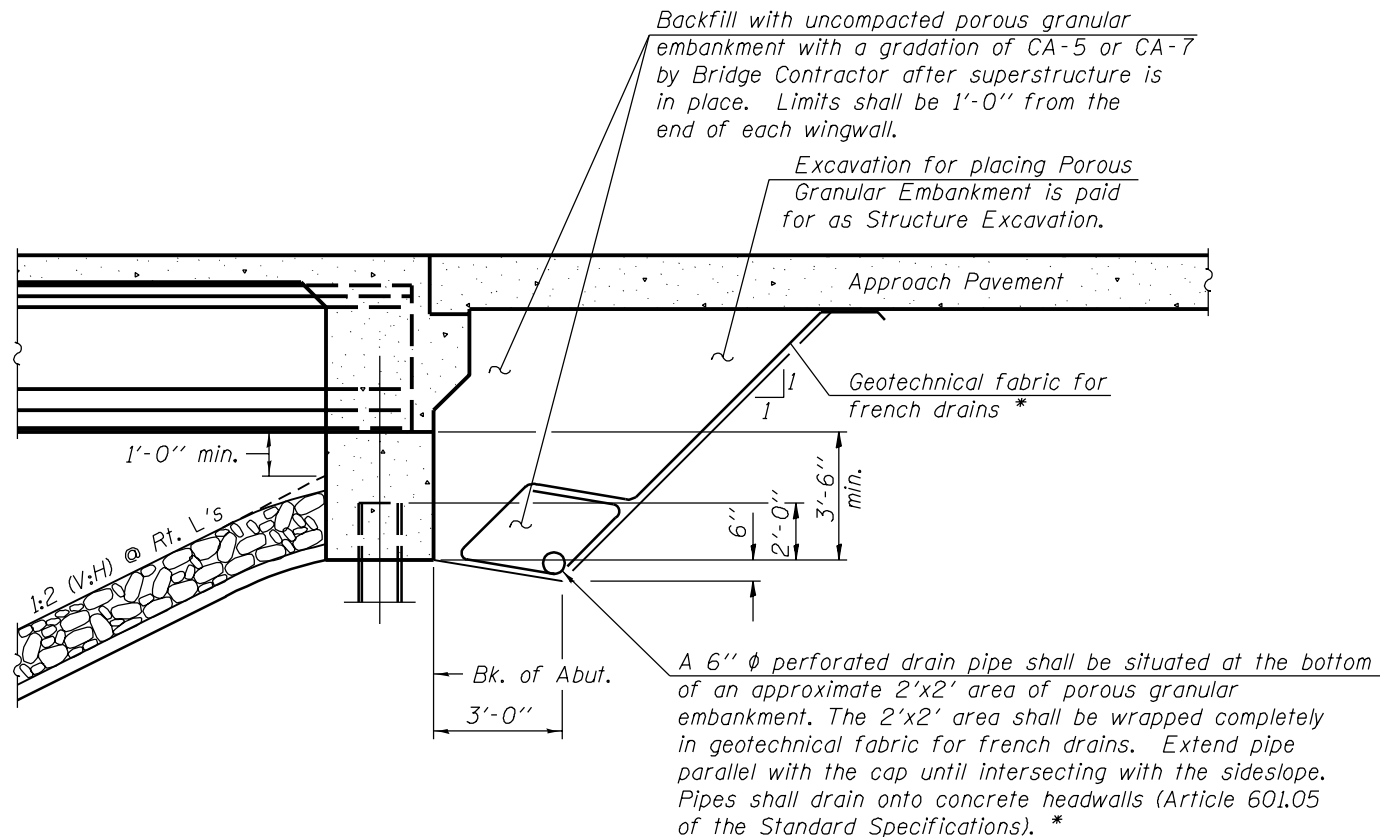
f'_c = 3,500 psi
 f_y = 60,000 psi (reinforcement)
 f_y = 36,000 psi (structural steel)

SEISMIC DATA

Seismic Performance Category (SPC) =
Bedrock Acceleration Coefficient (A) =
Site Coefficient (S) =

Name: GP0003

GPE INT ABUT SECT PPC BMS



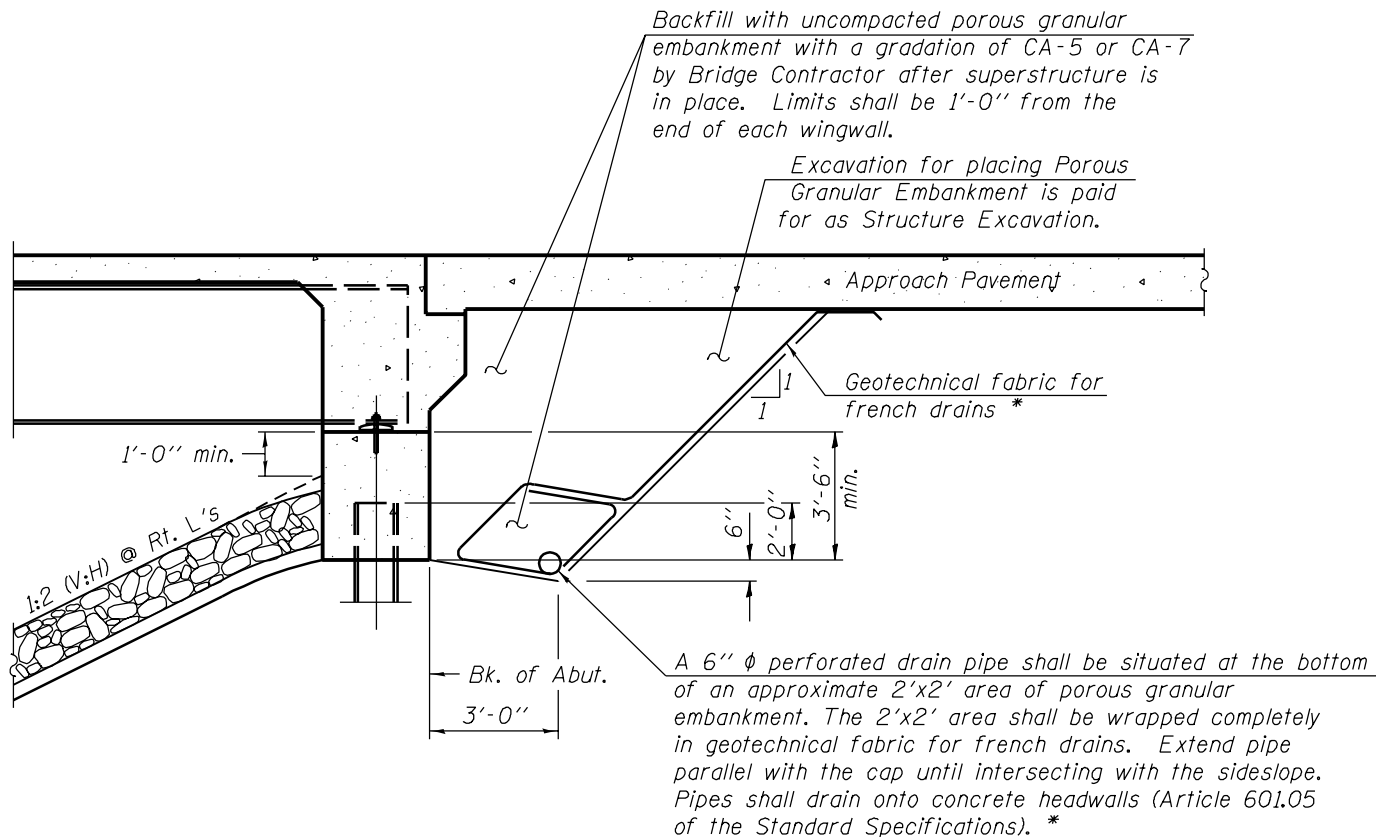
* Included in the cost of Porous Granular Embankment.

SECTION THRU INTEGRAL ABUTMENT

(Horiz. dim. @ Rt. L's)

Name: GP0004

GPE INT ABUT SECT STL BEAM



* Included in the cost of Porous Granular Embankment.

SECTION THRU INTEGRAL ABUTMENT

(Horiz. dim. @ Rt. L's)

Name: GP0005

TTL BILL OF MATERIAL 15 LN

TOTAL BILL OF MATERIAL

[illegible]

Name: GP0006

TTL BILL OF MATERIAL 20 LN

TOTAL BILL OF MATERIAL

[illegible]

Name: GP0007

TTL BILL OF MATERIAL 25 LN

TOTAL BILL OF MATERIAL

[illegible]

Name: GP0008

TTL BILL OF MATERIAL 30 LN

TOTAL BILL OF MATERIAL

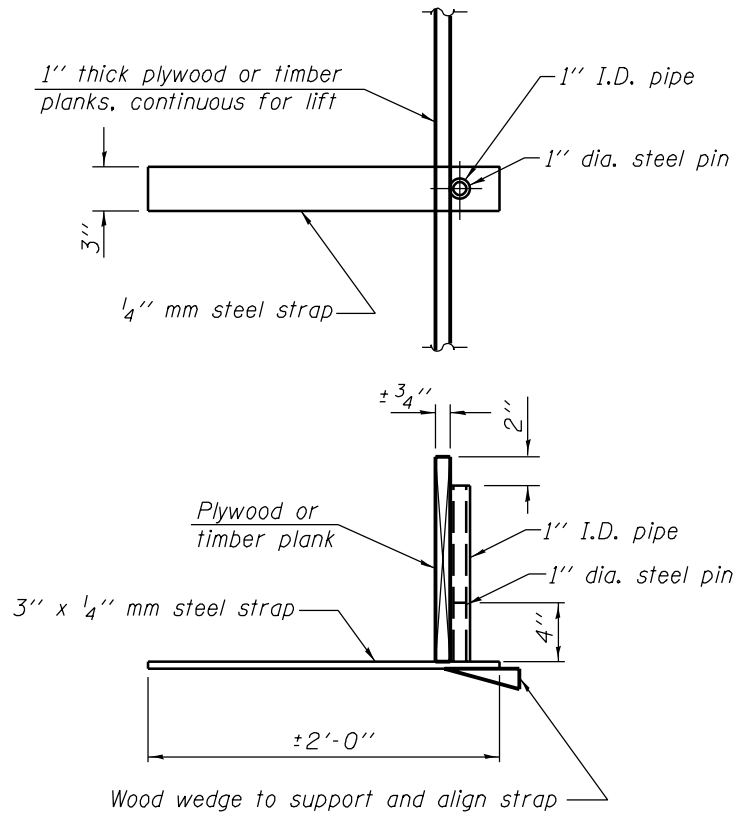
[illegible]

Name: GP0009
NAME PLATE

STATION	
BUILT	BY
STATE OF ILLINOIS	
LOADING HS20	
STR. NO.	

NAME PLATE
See Std. 515001

Name: GTBRAC
GEOTEXTILE WALL BRACE

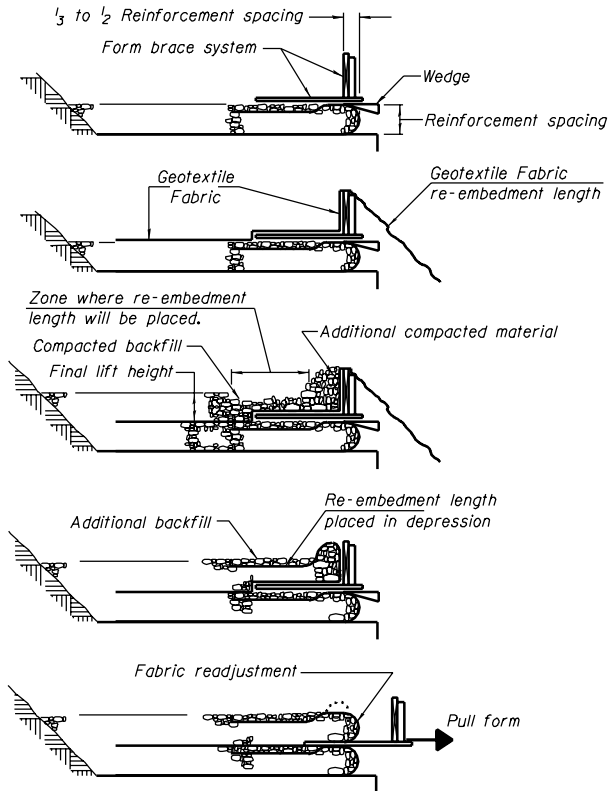


*Note:
This is a suggested detail, the Contractor
is responsible for the design of the form
brace system to be used.*

SUGGESTED GEOTEXTILE TEMPORARY
FORM BRACE SYSTEM DETAIL

Name: GTWALL

GEOTEXTILE WALL PROCEDURE



1. Place form brace system on completed reinforcement level; back from the finished fabric face a distance of $\frac{1}{3}$ to $\frac{1}{2}$ the reinforcement spacing.
2. Position fabric so that the required re-embedment length extends over the top of the form brace and the design reinforcement width is placed with no slack against the previous level.
3. Compact backfill material in lifts to final lift height, create ($\pm 3''$) depression in zone where re-embedment length will be located and place additional height of compacted material against form brace.
4. Fold fabric re-embedment length back over form brace into zone where depression was made in backfill and place additional compacted backfill, ($\pm 3''$) to embed fabric and bring to final lift height.
5. Pull form brace outward allowing fabric face to slightly readjust to form tight round face and level with plan reinforcement spacing.

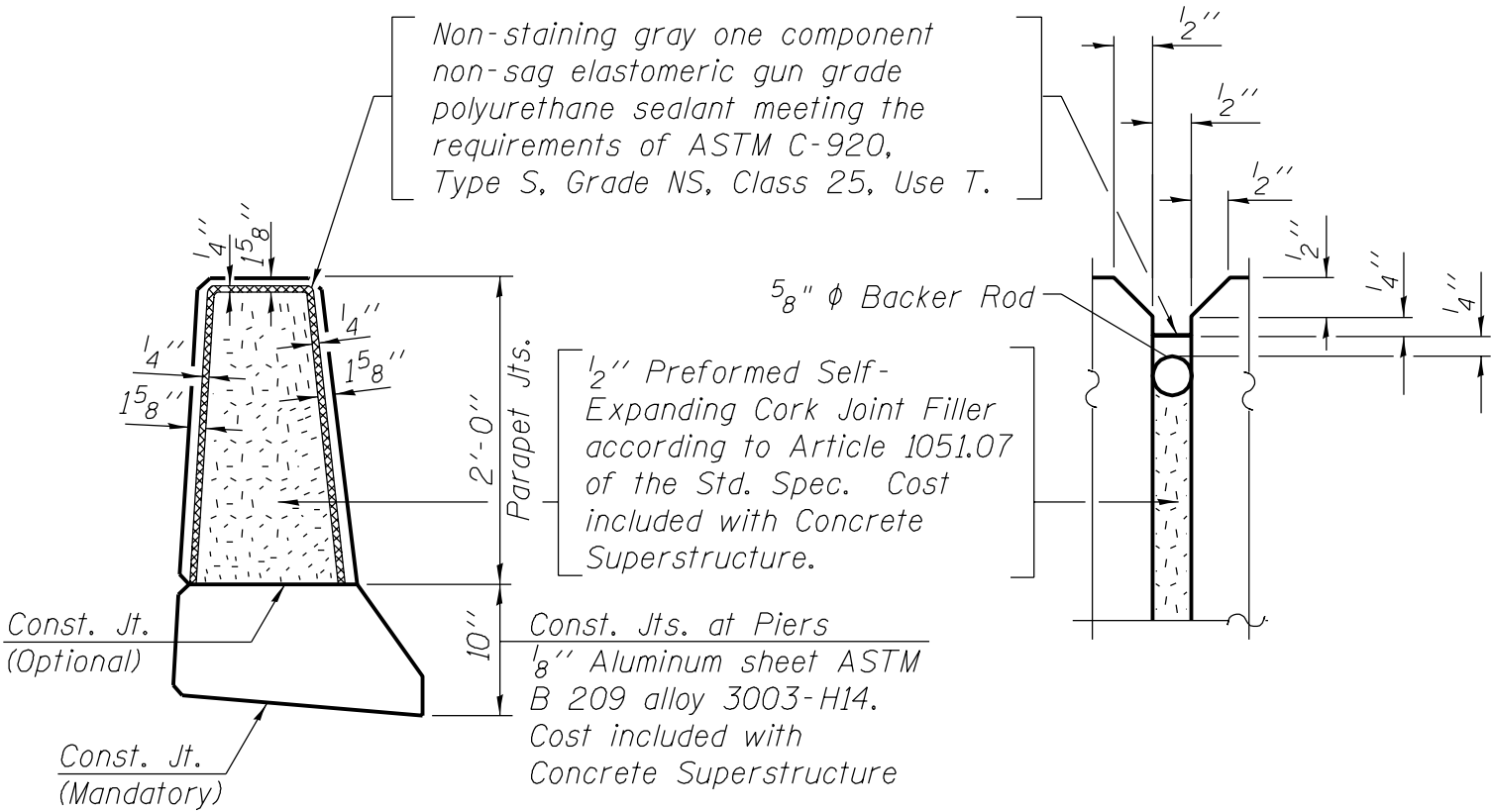
GEOTEXTILE WALL CONSTRUCTION PROCEDURE

Notes: The geotextile fabric shall have a minimum allowable tensile strength (T min.) of _____ lb./in. as determined by the procedure stated in the Special Provisions. The computations supporting the determination of (T min.) shall be submitted to the engineer for approval.

Name: NOTES

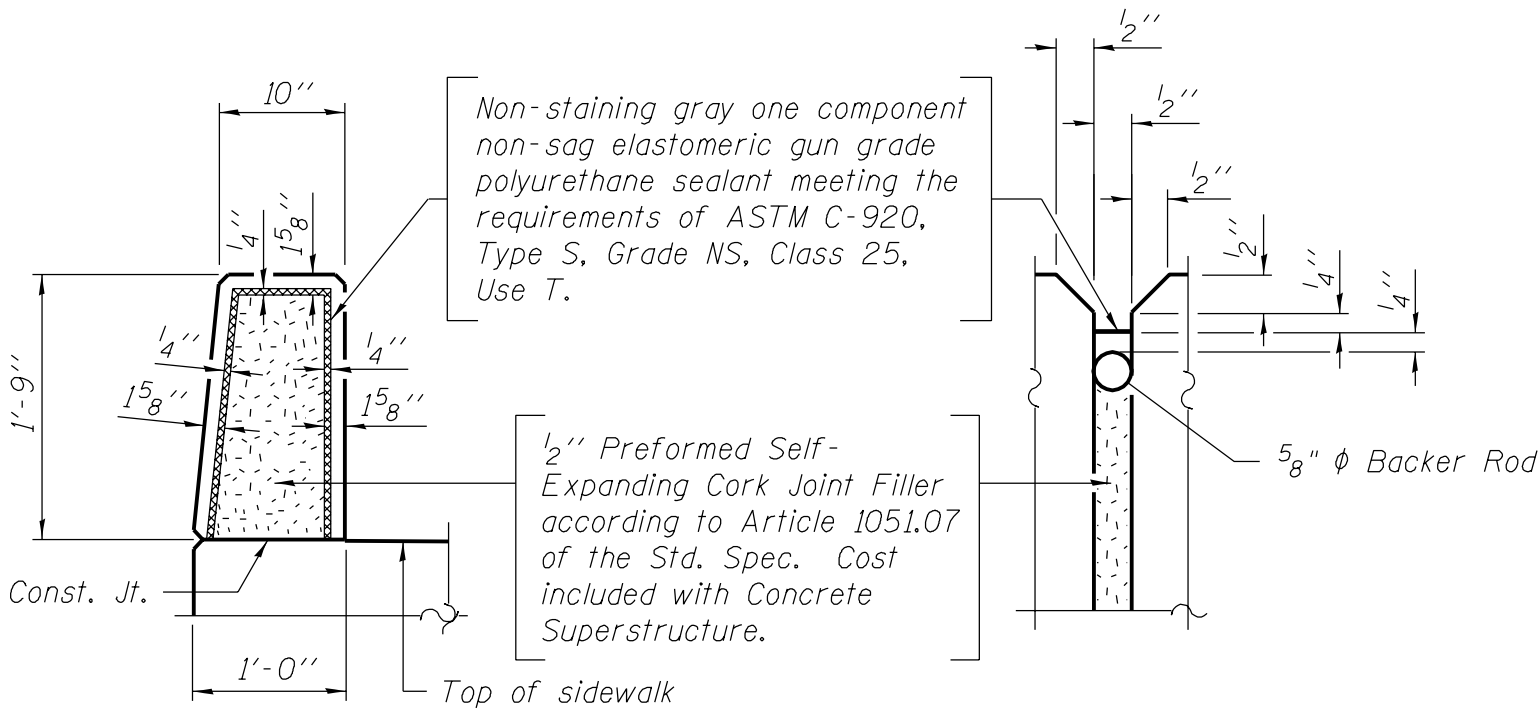
TEXT NODES FOR NOTES

Notes:



PARAPET JOINT DETAILS

Name: PARJT/
PARAPET JOINT AT SIDEWALK



PARAPET JOINT DETAILS

Name: P11

REM DISP UNSUIT MAT

Removal and Disposal of Unsuitable
Material

Cu. Yd.

Name: P12

POROUS GRANULAR EMBANKMENT

Porous Granular Embankment

Cu. Yd.

Name: P13

STONE RIPRAP CL A

Stone Riprap, Class A

Sq. Yd.

Name: P14

STONE DUMPED RIPRAP CL A

Stone Dumped Riprap, Class A

Sq. Yd.

Name: P15

FILTER FABRIC FOR RIPRAP

Filter Fabric for use with Riprap

Sq. Yd.

Name: P16

REM OF EXIST STRUCT

Removal of Existing Structures

Each

Name: P17

REM OF EXIST SUPERSTRUCT

Removal of Existing Superstructures

Each

Name: P18

CONCRETE REMOVAL

Concrete Removal

Cu. Yd.

Name: P19

BRIDGE HANDRAIL REMOVAL

Bridge Handrail Removal

Foot

Name: P110

HANDRAIL CONC REMOVAL

Handrail Concrete Removal

Foot

Name: PIII

REM OF EXIST CONC DECK

Removal of Existing Concrete Deck Each

Name: P112

STRUCTURE EXCAVATION

Structure Excavation

Cu. Yd.

Name: P113

COFFERDAM EXCAVATION

Cofferdam Excavation

Cu. Yd.

Name: P114

ROCK EXCAV FOR STRUCTURES

Rock Excavation for Structures

Cu. Yd.

Name: P115
COFFERDAMS

Cofferdams

Each

Name: P116

DRIVING STEEL PILES

Driving Steel Piles

Foot

Name: P117

FLOOR DRAINS

Floor Drains

Each

Name: P118

PREFORMED JOINT SEAL

Preformed Joint Seal ''

Foot

Name: P119

NEOPRENE EXP JOINT

Neoprene Expansion Joint '' Foot

Name: P120

CONCRETE STRUCTURES

Concrete Structures

Cu. Yd.

Name: P12/
CONCRETE SUPERSTRUCTURE

Concrete Superstructure

Cu. Yd.

Name: P122

BRIDGE DECK GROOVING

Bridge Deck Grooving

Sq. Yd.

Name: P123

SEAL COAT CONCRETE

Seal Coat Concrete

Cu. Yd.

Name: P124

PROTECTIVE COAT

Protective Coat

Sq. Yd.

Name: P125

ELASTOMERIC BRG ASSEMBLY

Elastomeric Bearing Assembly Type

Each

Name: P126

PPC DECK BEAMS

Precast Prestressed Concrete Deck
Beams ('' Depth)

Sq. Ft.

Name: P127

FURN ERECTING PPC BULB T

Furnishing and Erecting Precast
Prestressed Concrete Bulb T-Beams

Foot

Name: P128

FURN ERECTING PPC I BEAMS

Furnishing and Erecting Precast Prestressed Concrete I Beams,	“	Foot
--	---	------

Name: P129

PRECAST CONCRETE PANEL

Precast Concrete Panel

Sq. Ft.

Name: P130

PRECAST CONCRETE PLANK

Precast Concrete Plank

Sq. Ft.

Name: P131
PPC PLANK

Precast Prestressed Concrete Plank Sq. Ft.

Name: P132

FURN ERECTING STRUCT STL

Furnishing and Erecting Structural
Steel

L. Sum

Name: P133

FURN ERECTING STRUCT STL

Furnishing and Erecting Structural
Steel

Pound

Name: P134

STUD SHEAR CONNECTORS

Stud Shear Connectors

Each

Name: P135

STRUCTURAL STEEL REPAIR

Structural Steel Repair

Pound

Name: P136

CLN PAINTING STL BRIDGE

Cleaning and Painting Steel Bridge
No.

L. Sum

Name: P137

REINFORCEMENT BARS

Reinforcement Bars

Pound

Name: P138

REINF BARS EPOXY COATED

Reinforcement Bars, Epoxy Coated

Pound

Name: P139

ALUMINUM RAILING TYPE L

Aluminum Railing, Type L

Foot

Name: P140

STEEL RAILING TYPE

Steel Railing, Type

Foot

Name: P/4/

STEEL BRIDGE RAIL

Steel Bridge Rail

Foot

Name: P142
SLOPEWALL

Sloped wall	Inch	Sq. Yd.
-------------	------	---------

Name: P143

FURN METAL PILE SHELLS

Furnishing Metal Pile Shells " Foot

Name: P144

FURN STEEL PILES HP

Furnishing Steel Piles HP x Foot

Name: P145

FURN CONCRETE PILES

Furnishing Concrete Piles

Foot

Name: P146

DRIVING AND FILLING SHELLS

Driving and Filling Shells

Foot

Name: P147

DRIVING CONCRETE PILES

Driving Concrete Piles

Foot

Name: P148

TEST PILE METAL SHELLS

Test Pile Metal Shells

Each

Name: P149

TEST PILE STEEL HP

Test Pile Steel HP x

Each

Name: P150

TEST PILE CONCRETE

Test Pile Concrete

Each

Name: P15/
METAL SHOES

Metal Shoes

Each

Name: P152

STEEL SHEET PILING

Steel Sheet Piling

Sq. Ft.

Name: P153

TEMPORARY SHEET PILING

Temporary Sheet Piling

Sq. Ft.

Name: P154

TEMPORARY BRIDGE RAIL

Temporary Bridge Rail

Foot

Name: P155
NAME PLATES

Name Plates

Each

Name: P156

EXP BOLTS 3 4 INCH

Expansion Bolts 3/4 Inch

Each

Name: P157

CONCRETE BOX CULVERTS

Concrete Box Culverts

Cu. Yd.

Name: P158

WATERPROOFING MEMBRANE SYS

Waterproofing Membrane System

Sq. Yd.

Name: P159

SAND BACKFILL

Sand Backfill

Cu. Yd.

Name: P160

BRIDGE SEAT SEALER

Bridge Seat Sealer

Sq. Ft.

Name: P16/
EPOXY CRACK SEALING

Epoxy Crack Sealing

Foot

Name: P162

TEMP CONCRETE BARRIER

Temporary Concrete Barrier

Foot

Name: P163

FLT BRG GUIDED EXPANSION

Floating Bearing, Guided Expansion Each

Name: P164

FLT BRG NON GUIDED EXP

Floating Bearing, Non-Guided Expansion Each

Name: P165

FLOATING BEARING FIXED

Floating Bearing, Fixed

Each

Name: P166

DRAINAGE SCUPPERS DS12

Drainage Scuppers, DS-12

Each

Name: P167

DRAINAGE SCUPPERS DS33

Drainage Scuppers, DS-33

Each

Name: P168

BRIDGE JT SYSTEM EXPANSION

Bridge Joint System (Expansion)

Foot

Name: P169

BRIDGE JT SYSTEM FIXED

Bridge Joint System (Fixed)

Foot

Name: P170

DRAINAGE SCUPPERS DSII

Drainage Scuppers, DS-11

Each

Name: P171

BAR SPLICERS

Bar Splicers

Each

Name: P172

DRILLED SHAFT IN SOIL

Drilled Shaft in Soil " Dia.

Foot

Name: P173

DRILLED SHAFT IN ROCK

Drilled Shaft in Rock " Dia. Foot

Name: P174

DRAINAGE SYSTEM

Drainage System

L. Sum

Name: P175

JACKING AND CRIBBING

Jacking and Cribbing

Each

Name: P176

TEMP SUPPORT SYSTEM

Temporary Support System

Each

Name: P177

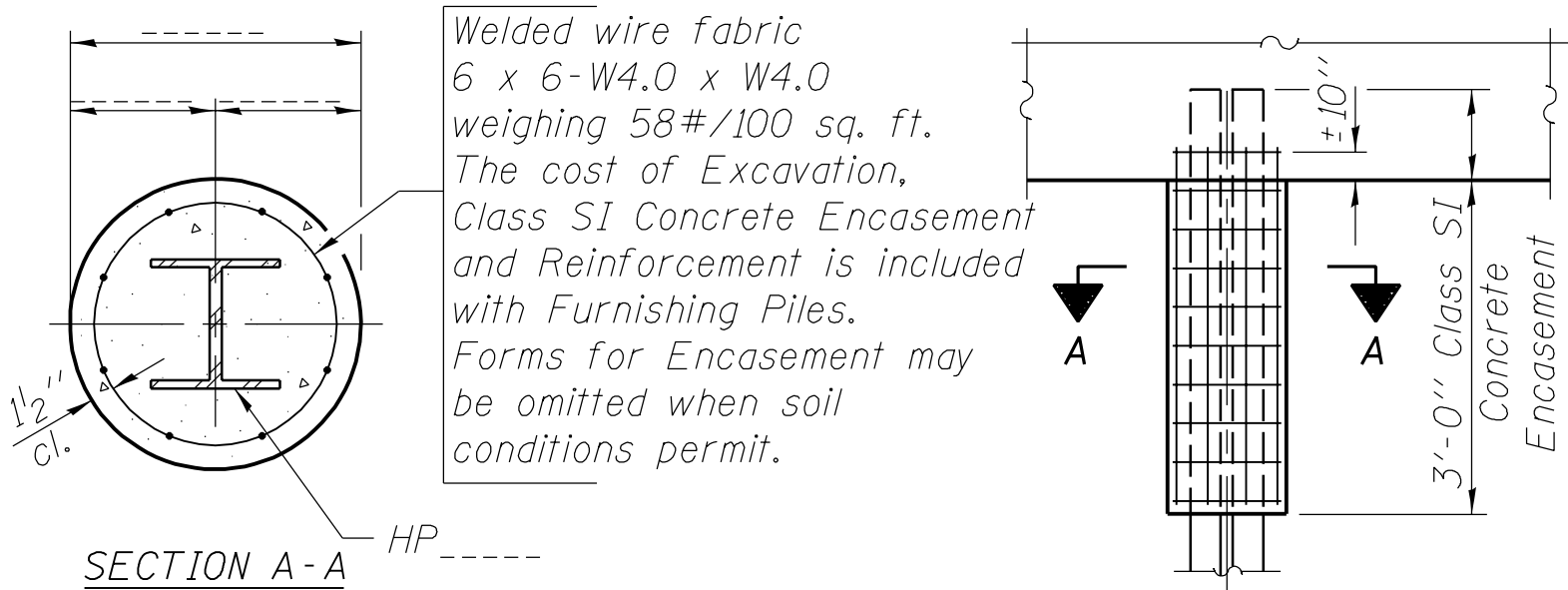
TEMP WALL BRACING SYSTEM

Temporary Wall Bracing System

L. Sum

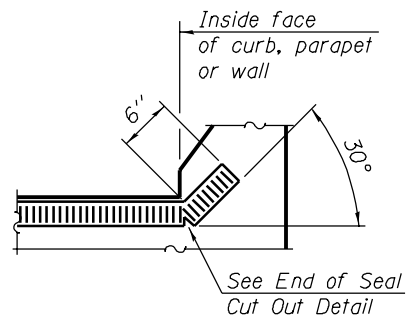
Name: PILENC

PILE ENCASEMENT DETAILS

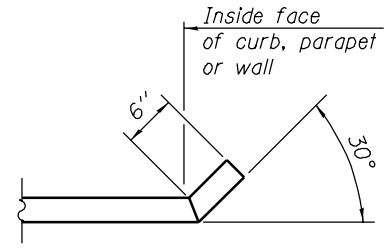


PILE ENCASEMENT DETAIL

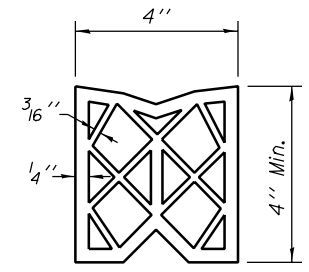
Name: PJS
PJS DETAILS



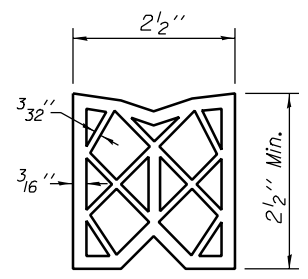
END OF SEAL



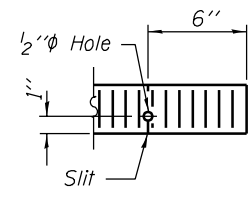
END OF PLATE



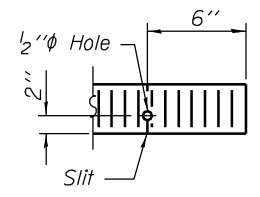
PREFORMED JOINT SEAL (4'')



PREFORMED JOINT SEAL (2 1/2'')

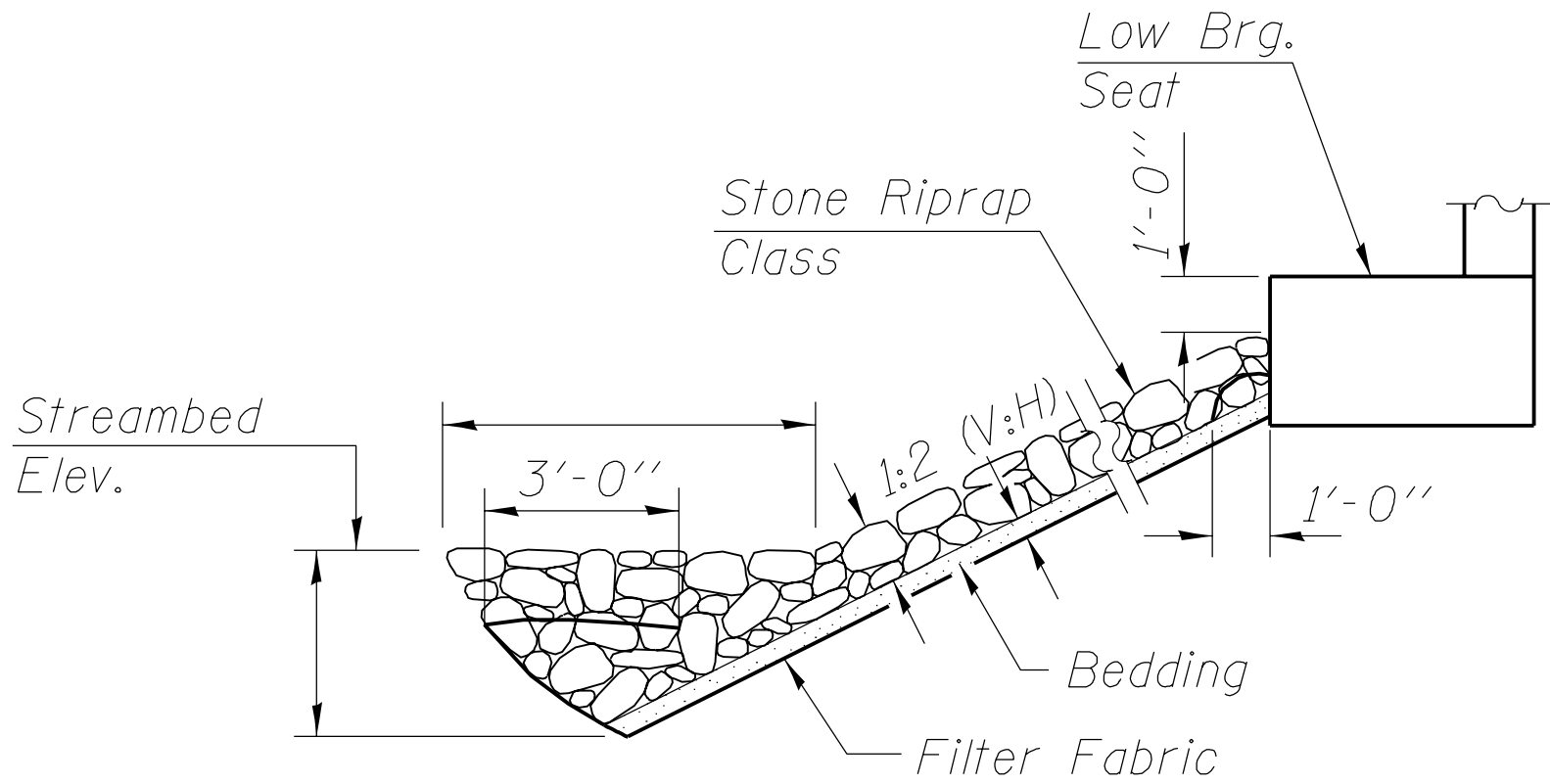


SEAL CUT-OUT



SEAL CUT-OUT

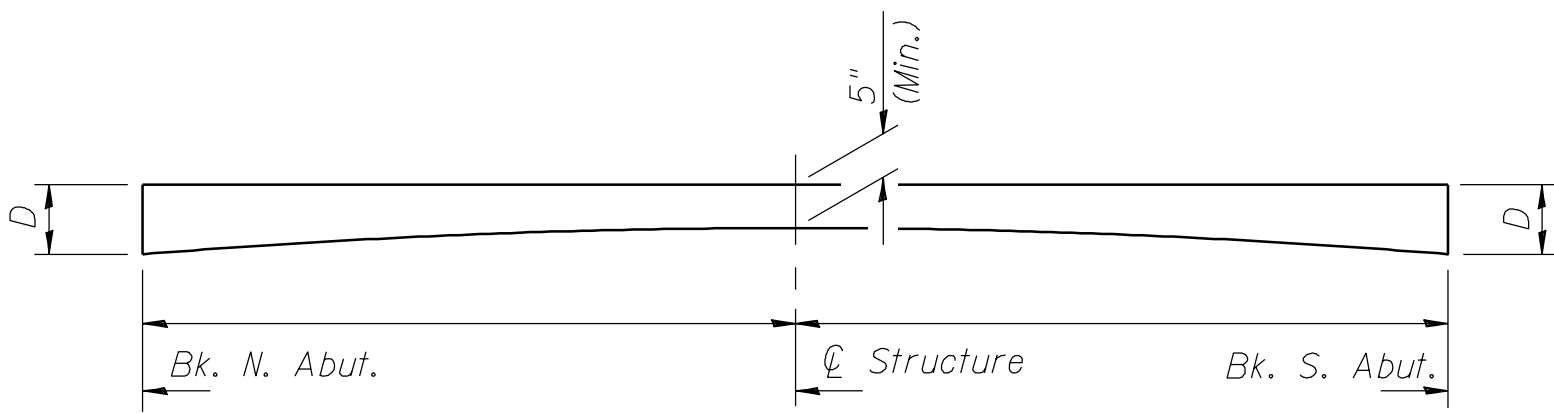
Name: RRAP
RIPRAP ANCHOR DETAIL



STONE RIPRAP ANCHOR DETAIL

Name: SMROIE

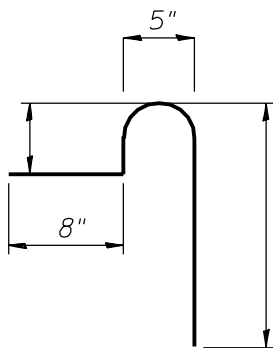
SIDE MOUNT RAIL DETAILS



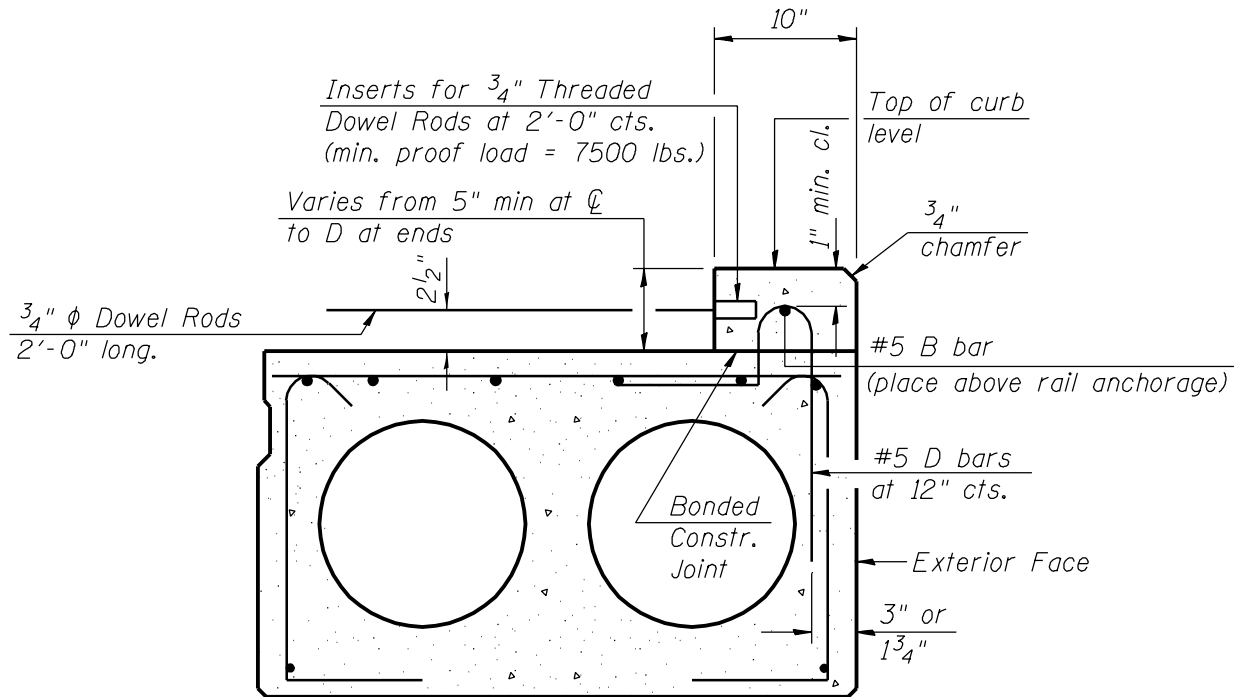
REINFORCED CONCRETE WEARING SURFACE PROFILE

$$D = 5" + \text{Camber}$$

Name: SMR02E
SIDE MOUNT RAIL DETAILS



#5 D BAR



SECTION THRU EXTERIOR BEAMS

See Section Thru Interior Beams for strand pattern, dimensions and bar call outs.

Name: SMR03E

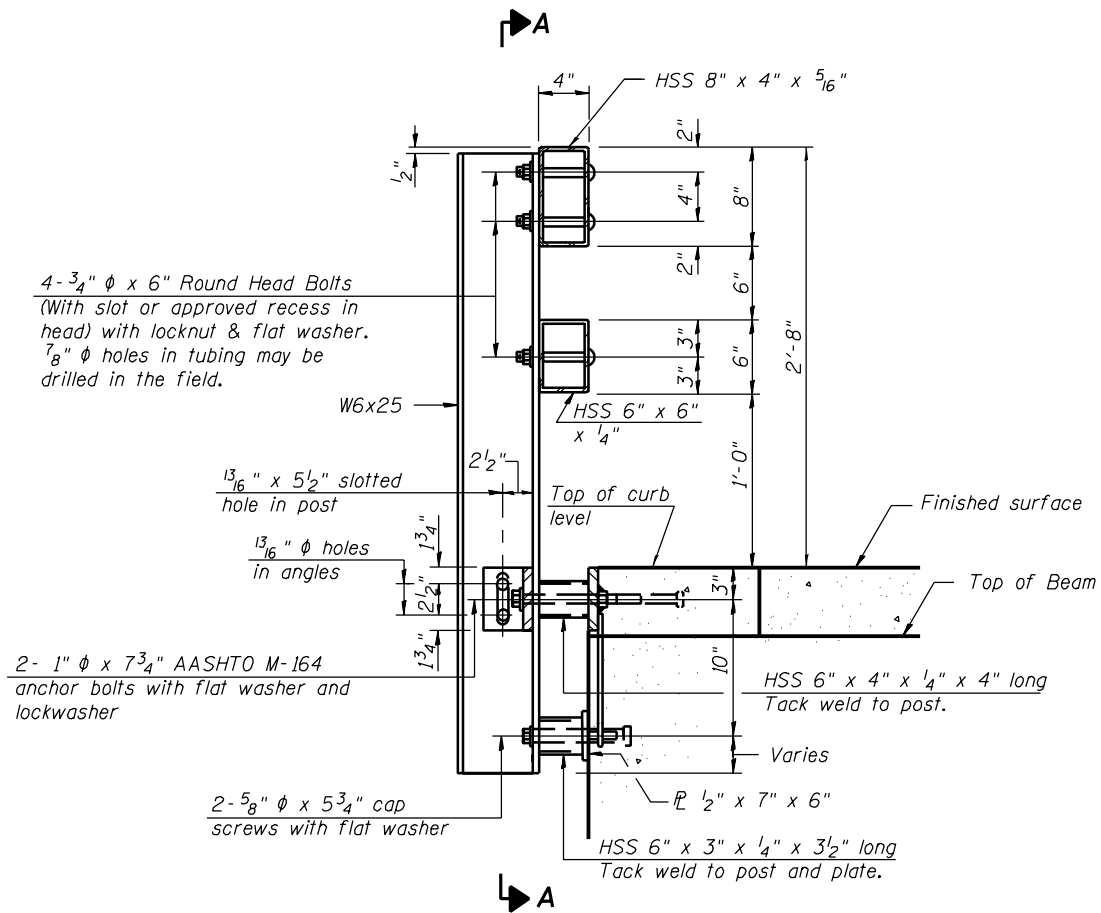
SIDE MOUNT RAIL DETAILS

Bridge rail inserts shall be cast in precast beams and curbs. Curbs shall be cast by the precast prestressed concrete supplier after strands have been released and prior to shipping the beam. The concrete in the curb shall be the same as specified for the deck beams.

The curb inserts and threaded dowel rods may be either epoxy coated or galvanized and the cost shall be included with precast prestressed concrete deck beams.

Name: SMR04E

SIDE MOUNT RAIL DETAIL



SECTION AT RAIL POST

[illegible]

SECTION THRU SIDEWALK

Name: TABLE/
LOAD FACTOR DES TABLES NOTE

INTERIOR GIRDER MOMENT TABLE			
	0.4 Sp. 1	Pier	0.6 Sp. 2
I_s	(in ⁴)		
I_c (n)	(in ⁴)		
I_c (3n)	(in ⁴)		
S_s	(in ³)		
S_c (n)	(in ³)		
S_c (3n)	(in ³)		
Z	(in ³)		
\bar{Q}	(k/ft.)		
$M\bar{Q}$	('k)		
$s\bar{Q}$	(k/ft.)		
$Ms\bar{Q}$	('k)		
M_L	('k)		
M (Imp)	('k)		
$5_s[M_L + M(Imp)]$	('k)		
M_a	('k)		
M_u	('k)		
$fs\bar{Q}$ non-comp (k.s.i.)			
$fs\bar{Q}$ (comp) (k.s.i.)			
$fs5_s(L + Imp)$ (k.s.i.)			
fs (Overload) (k.s.i.)			
fs (Total) (k.s.i.)			
VR	(k)		

INTERIOR GIRDER REACTION TABLE			
	Abut.	Pier	Abut.
$R\bar{Q}$	(k)		
R_L	(k)		
Imp_s	(k)		
R (Total)	(k)		

I_s and S_s are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).

$I_c(n)$ and $S_c(n)$ are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.

$I_c(3n)$ and $S_c(3n)$ are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)

VR is the maximum Live Load + Impact shear range in span.

Z is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.

M_a (Applied Moment) = $1.3[M\bar{Q} + Ms\bar{Q} + 5_s(M_L + M(Imp))]$.

The Plastic Moment capacity (M_u) is computed according to AASHTO 10.48.1 and 10.50.1.1.

fs (Overload) is the sum of the stresses due to $M\bar{Q} + Ms\bar{Q} + 5_s(M_L + M(Imp))$.

fs (Total) (Non-compact section) is the sum of the stresses due to $1.3[M\bar{Q} + Ms\bar{Q} + 5_s(M_L + M(Imp))]$.

INTERIOR BEAM MOMENT TABLE			
	0.4 Sp. #1 0.6 Sp. #3	Pier 1 or 2	0.5 Sp. #2
Strand Pattern			
I (in ⁴)			
I' (in ⁴)			
S_b (in ³)			
S_b' (in ³)			
S_t (in ³)			
S_t' (in ³)			
\bar{Q} (k/')			
$M \bar{Q}$ (k)			
$s \bar{Q}$ (k/')			
$Ms \bar{Q}$ (k)			
$M \bar{L}$ (k)			
$M (Imp)$ (k)			

INTERIOR BEAM REACTION TABLE			
	Abut.	Pier 1 Span 1 Pier 2 Span 3	Pier 1 Span 2 Pier 2 Span 2
$R \bar{Q}$ (k)			
$Rs \bar{Q}$ (k)			
$R \bar{L}$ (k)			
$Imp.$ (k)			
$R (Total)$ (k)			

I and I' are the moment of inertia and composite moment of inertia of the beam section.
 S_b and S_b' are the non-composite and composite section modulus for the bottom fiber of the prestressed beam.
 S_t and S_t' are the non-composite and composite section modulus for the top fiber of the prestressed beam.

Name: TABLE 3
LRFD TABLES FOR STEEL BEAMS

INTERIOR GIRDER MOMENT TABLE		
	0.4 Sp. 1 or 0.6 Sp. 2	Pier 1
Is	(in ⁴)	
Ic (n)	(in ⁴)	
Ic (3n)	(in ⁴)	
Ss	(in ³)	
Sc (n)	(in ³)	
Sc (3n)	(in ³)	
Z	(in ³)	
DC1	(k/')	
M DC1	('k)	
DC2	(k/')	
M DC2	('k)	
DW	(k/')	
M DW	('k)	
M $\frac{1}{4}$ Imp	('k)	
Ma (Strength I)	('k)	
Mr	('k)	
fs DC1	(ksi)	
fs DC2	(ksi)	
fs DW	(ksi)	
fs 1.3($\frac{1}{4}$ +I)	(ksi)	
fs (Service II)	(ksi)	
fs (Total)(Strength I)	(ksi)	
Vsr	(k)	

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs due to non-composite loads.

Ic(n) and Sc(n) are the moment of inertia and section modulus of the composite section used in computing fs due to short-term composite loads.

Ic(3n) and Sc(3n) are the moment of inertia and section modulus of the composite section used in computing fs due to long-term composite loads.

Z is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.

DC1 is the dead load acting on the non-composite section.

DC2 is the dead load acting on the long-term composite section.

DW is the dead load acting on the long-term composite section due to wearing surface.

Ma (Strength I)=1.25 M(DC1+DC2)+1.5 M DW +1.75 M($\frac{1}{4}$ +Imp)

Mr is the full plastic moment capacity computed in accordance with 6.10.3.1.3 and 6.10.4.2.2.

fs (Service II) is the sum of the stresses due to DC1+DC2+DW+1.3($\frac{1}{4}$ +Imp)

fs (Total) (Strength I) (Non-Compact Section) is the sum of the stresses due to 1.25(DC1+DC2)+1.5DW+1.75($\frac{1}{4}$ +Imp)

Vsr is the maximum shear range in the span (0.75 $\frac{1}{4}$ +Imp)

INTERIOR GIRDER REACTION TABLE		
HL93 Loading		
	Abutment	Pier
R DC1	(k)	
R DC2+DW	(k)	
R $\frac{1}{4}$	(k)	
R Imp	(k)	
R Total	(k)	

Name: *TABLE 4*
LRFD TABLES FOR PPC BEAMS

<i>INTERIOR BEAM MOMENT TABLE</i>		
	<i>0.4 Sp. 1 or 0.6 Sp. 2</i>	<i>Pier 1</i>
<i>I</i> (<i>in⁴</i>)		
<i>I'</i> (<i>in⁴</i>)		
<i>S_b</i> (<i>in³</i>)		
<i>S_b'</i> (<i>in³</i>)		
<i>S_t</i> (<i>in³</i>)		
<i>S_t'</i> (<i>in³</i>)		
<i>DC1</i> (<i>k/'</i>)		
<i>M DC1</i> (<i>'k</i>)		
<i>DC2</i> (<i>k/'</i>)		
<i>M DC2</i> (<i>'k</i>)		
<i>DW</i> (<i>k/'</i>)		
<i>M DW</i> (<i>'k</i>)		
<i>M_L + Imp</i> (<i>'k</i>)		

I and I' are the moment of inertia and composite moment of inertia of the beam section.

S_b and S_b' are the non-composite and composite section modulus for the bottom fiber of the prestressed beam.

S_t and S_t' are the non-composite and composite section modulus for the top fiber of the prestressed beam.

M Imp is the moment due to live load impact on the composite section.

DC1 is the dead load acting on the non-composite section.

DC2 is the dead load acting on the long-term composite section.

DW is the dead load acting on the long-term composite section due to wearing surface.

<i>INTERIOR BEAM REACTION TABLE</i>		
<i>HL93 Loading</i>		
	<i>Abutment</i>	<i>Pier</i>
<i>R DC1</i> (<i>k</i>)		
<i>R DC2+DW</i> (<i>k</i>)		
<i>R_L</i> (<i>k</i>)		
<i>R Imp</i> (<i>k</i>)		
<i>R Total</i> (<i>k</i>)		

Name: *TMPBRR*

TEMPORARY CONCRETE BARRIER



Temporary Concrete Barrier

See Std. 704001, typ.